DOCUMENT RESUME

ED 375 647 FL 022 485

TITLE	Syntax and Morphology. Working Papers in Linguistics 18.
INSTITUTION	Trondheim Univ. (Norway). Dept. of Linguistics.
REPORT NO	ISSN-0802-3956
PUB DATE	93
NOTE	95p.
AVAILABLE FROM	Dept. of Linguistics, University of Trondheim, N-7055 Dragvoll, Norway.
PUB TYPE	Collected Works - Serials (022)
JOURNAL CIT	University of Trondheim Working Papers in Linguistics; n18 1993
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	Affixes; Foreign Countries; Form Classes (Languages); *Grammar; Language Patterns; Language Research; Linguistic Theory; *Morphology (Languages); *Norwegian; *Slavic Languages; Structural Analysis (Linguistics); Swahili; *Syntax; Uncommonly Taught Languages
IDENTIFIERS	Clitics; Relative Clauses

ABSTRACT

Four papers on syntax and morphology are presented. "Clitics in Slavic" (Mila Dimitrova-Vulchanova) discusses the syntactic relevance of clitic placement across Slavic languages, and the functional categories that are or might be instrumental in determining placement of clitics and clitic clusters. In "A Promotion Analysis of Restrictive Relative Clauses" (Tor A. Afarli), it is argued that in syntactic analysis of Norwegian, a variant of the non-standard promotion (head-raising) analysis is appropriate for the most common type of restrictive relative clauses, those that have the complementizer "som" as relative clause particle. In "The Case for a 'Progressive' Derivational Affix in Kiswahili Predicate Items" (Assibi Apatewon Amidu) the structure of derivational affixes in Swahili is revised, focusing on some of the rules used to describe the "applicative" and "reversive" derivational affixes. An additional affix category is proposed. "Asymmetry in Symmetrical Object Languages: A Problem for LFG?" (Camillia N. Keach, Michael S. Rochemont) examines the asymmetric behavior induced by possessor raising in symmetrical object languages in the context of existing theory. Each paper contains references. (MSE)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Arne Kjell Foldvik
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ED 375 647

BEST COPY AVAILABLE

CLITICS IN SLAVIC *

Mila Dimitrova-Vulchanova
Sofia University/University of Trondheim

0. Introduction

As is well known, Slavic has exponents of most 'special clitic' types (i.e., clitics showing special syntactic behavior compared to full lexical members of the same category; cf. Zwicky 1977), e.g. pronominal clitics, auxiliary clitics, question clitics etc. However, there appears to be a lot of variation in the principles of clitic placement. For instance, while West Slavic and Serbo-Croat (a South-Slavic language), in terms of linear order, strictly recognize the 'clause second' position for clitics (also referred to as 'Wackernagel's law'), Bulgarian and Macedonian (the rest of South Slavic), on the surface, appear to have no such strict principle of clitic placement (also cf. I. 3).

Historically, the Slavic languages shared the clause second principle, which leads the linguist into speculations as to whether the modern languages might share some similar or other common principle for clitic placement. The aim of this paper is to find the syntactically relevant location sites for clitics across Slavic, as well as the functional categories that are or might be instrumental in determining the placement of clitics and clitic clusters.

Based on the survey of the patterns of clitic placement in Slavic, a prediction is made that there are three basic options for clitic placement to be found across languages. It is also suggested that functional categories are in a special government relationship with some other categories as defined by the 'Uniqueness of Attraction principle' (cf. II.3), e.g. the placement of Argument clitics in Bulgarian and Macedonian is shown to be governed by Finiteness, whereas in Serbo-Croat Finiteness is responsible for the placement of Negation. Another suggestion with respect to accounting for the options for clitic placement across Slavic is the formulation of the principle of 'Clause Structure Projection' (cf. II.4),according to which clitics in Slavic seek a structurally important adjunction site maximally early in the clause, thus being incorporated in the segment which carries all the clause structure relevant information.

*This paper is related to a forthcoming work on clitichood criteria and other basic issues by the same author, as well as a paper on clitics, syntactic categories and the principles of grammar by Lars Hellan, which will provide some analytical and definitional developments of the facts and principles put forward here.

The paper is part of the author's work on the NAVF (The Norwegian Scientific Research Council) sponsored project 'Clitics and Argument Structure'.

0.1 Some Theoretical Assumptions

For the sake of the analysis of the syntactic structure of the Slavic languages under consideration, a construct FRONT is introduced to apply to the description of clause initial structure. It replaces notions like TOPIC and FOCUS employed in previous analysis of Bulgarian (Rudin 1986).[1] The adequacy of such a construct is argued for in detail below, however, some of the reasons for introducing the notion are briefly mentioned here.

In Slavic there exists mechanisms for fronting verbs and topicalizing larger constituents, the triggers for which are much more complex and versatile than e.g. just providing overt non-clitic material to precede clause-second clitics in e.g. Serbo-Croat (as suggested in ´Cavar and Wilder 1992). The constituents that can topicalize range from NPs to wh-elements, adverbial phrases, and even extractions from such phrases (as in the case of Serbo-Croat and Czech modifier adjectives or possessive/demonstrative pronouns extracted from their respective phrases and moved to clause initial position). Verb-fronting applies to main verbs and auxiliaries, depending on the grammaticality constraints for each language.[2] FRONT is to be seen as the landing site for all of these topicalized constituents and fronted verbs, and is to be viewed as part of the minimal base clause structure. As will be shown, special complementarity relations among the constituents in FRONT, as well as a positioning hierarchy, ought to be recognized and defined (also cf. the Serbo-Croat case of strict complementarity between topicalizing and fronting discussed in I.3.3.2).

PART I. THE PATTERNS OF THE SLAVIC LANGUAGES

1. Bulgarian

1.1 The clitic paradigm

The following items belong under the notion 'clitic' to be considered here:

i) Argument clitics ('Arg-cl')

Forms of full pronominals:			Clitic forms (non-reflexive):	
	Nom.	Acc.	Acc.	Dat.
l.p.	az	mene	me	mi
2.p.	ti	tebe	te	ti
3.p.	toj/tja/to	nego/neja/nego	go/ja/go	mu/í/mu
l.p.	nie	nas	ni	ni
2.p.	vie	vas	vi	vi
3.p	te	tjax	gi	im

Reflexive clitics:

Acc.	Dat.
se	si

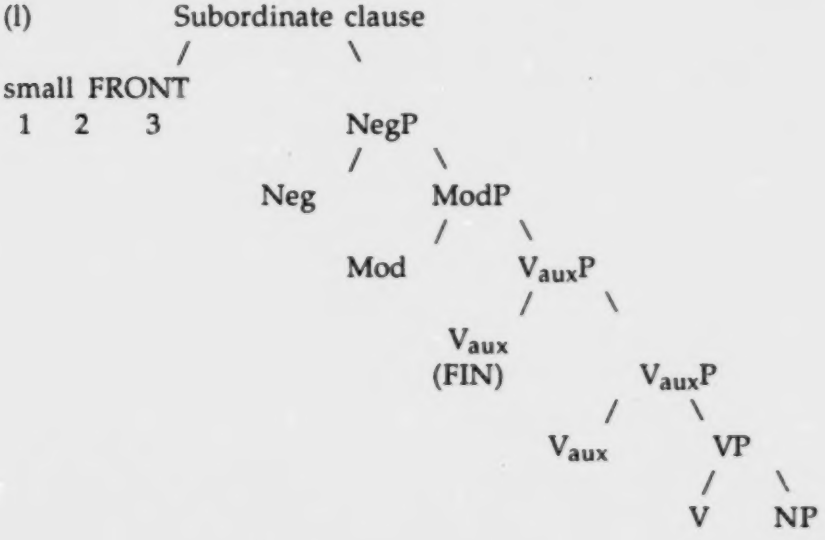
ii) Auxiliary clitics ('aux-cl')
These are present tense forms of 'be': - *sŭm, si, e, sme, ste, sa.*
It has to be noted that Bulgarian has non-clitic auxiliaries, too, like *bjax, bese* (Past tense forms of 'be'). We return to the distinctions in the distribution of non-clitic auxiliaries and clitic auxiliaries below.

iii) the question element *li*

1.2 Bulgarian syntactic structure

As a general constraint, in a finite clause, Tense and person agreement go on the first verb. We assume this to be implemented as a ('static') wellformedness condition, rather than as a movement rule (moving first V to a finiteness node, or vice versa); hence there will be no node 'Finiteness' viewed simply as the tense/agreement morpheme. However, we posit a FIN node which is a finite auxiliary; this node may be regarded as a finiteness form becoming visible when it has a word-level exponent in the form of an auxiliary. Finite main verbs do not count as separate exponents of FIN, since, unlike auxiliaries, they have a lexical component and incorporate finiteness in the form of a morpheme.

In Bulgarian the asymmetry between main and subordinate clauses is minimal, so FRONT is adequate in the analysis of subordinate clauses as well. For the subordinate clause, we thus assume the following maximal structure:



The asymmetry between main and subordinate clauses is instantiated in

only one major distinction, namely that FRONT in subordinate clauses disallows moved verbs (cf. (2)b below) and wh-constituents, unless the latter function as complementizers themselves; hence the labelling 'small FRONT' as opposed to 'FRONT' in the otherwise identical structure (3) for main clauses. Otherwise, the fronting site in subordinate clauses allows for up to three elements (cf. (2)e) like in main clauses. Thus the main/subordinate clause asymmetry in terms of clause-initial structure in Bulgarian can be defined as qualitative rather than quantitative. Thus, being minimal, the main/subordinate clause asymmetry assumes a less crucial role than, e.g. in Germanic. For this reason further analysis will draw equally on both main and subordinate clauses.

(2)a. Četjal sŭm ja bil knigata
read have(1s) it(A) had book-the

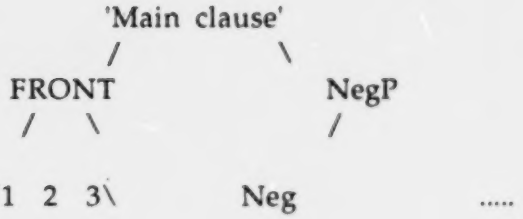
b. *Toj kaza, če___četjal sŭm ja bil knigata
he said that read have(1s) it(A) had book

c. Toj kaza, če knigata sŭm mu ja bil dal
he said that book-the have(1s) him(D) it(A) had(pp) given
(He said that I had given him that particular book)

d. Toj kaza, če na tebe sŭm ja bil dal knigata
he said that to you have(1s) it(A) had given book-the
(He said that it was you I had given that book to)

e. Toj kaza, če tozi covek ti si go bil vizdal
he said that this man you have(2s) him(A) had(pp) seen

(3)



Elements that can be fronted in main clauses are wh-constituents, topicalized constituents, and two types of verbs: non-finite verbs and non-clitic finite verbs. The possibilities for fronting otherwise differ between declarative clauses and question clauses.

The following constraints apply to verb fronting in declarative main clauses:

(i) Verb fronting can only apply if the FRONT position is otherwise empty:

(4)a. Četjal sŭm ja bil knigata
read have(1s) it(Acl) had(pp) book-the

b. *Az četjal sŭm ja bil knigata

I read have it(cl) had(pp) book-the

c. *Četjal az sŭm ja bil knigata
read I have it(cl) had(pp) book-the

d. *Kakvo dal si mu bil?
what given have(2s) him(Dcl) had(pp)
(What have you given him?)

e. *Knigata čel sŭm ja bil
book-the read have(1s) it(Acl) had(pp)

It deserves mention that subject NPs in Bulgarian are here treated as constituents originating in FRONT. An imaginable alternative would be to assume that there are two distinct constituents FRONT and Spec-of-CP, with FRONT preceding and being adjoined to CP (S in Rudin's (1986) terms[3])) and that subject appears in Spec-of-CP. This structure, however, is undesirable for at least four reasons:

a) It provides no way of excluding (4c), since a non-topicalized subject would not be part of FRONT and hence would not block verb movement to FRONT.

b) It involves postulating a number of CP projections (or, in Rudin's terminology, (S)) to accommodate the constituents in clause-initial structure.

c) In view of the data, a re-formulation of the base structure would become necessary in the cases when the subject intervenes between fronted constituents or precedes them (cf (7)a and the examples in 1.5). Such a re-formulation would have to include the unprincipled solution of at least one more node (site) which either dominates FRONT or is dominated by CP (also see Rudin's suggestion mentioned in footnote 3).

d) Bulgarian being a pro-drop language, a phonetically realized subject will always be a syntactically marked choice; hence an analysis in the spirit of the CP-Spec idea would be rather abstract since in most cases the node would be empty - either due to pro-drop or to the subject NP being 'chased' from its base position and topicalized as part of a chain process involving V-fronting.

The second constraint on verb fronting in declarative clauses is (ii), illustrated in (5):

ii) Verb fronting cannot cross Negation (Neg).

(5) *Četjal ne sŭm ja bil knigata

The following general principle can be described as operative in main clauses in Bulgarian:

(6) Principle (X):
If Neg is empty, FRONT must be lexically filled.

The above principle and (ii) together might suggest that Neg is actually part of FRONT (and even head). Then (X) would have to be reformulated to read:

(6') Principle (X')
FRONT must be filled, and can only have one element.

However, Negation is perfectly compatible with a subject preceding it ((7)).

(7) Az ne sŭm ja cel knigata
I Neg have it read book-the

Also in interrogative clauses, to be discussed shortly, FRONT is the landing site for more than one element ((8)).

(8) a. Ivan xodil li e tam?
Ivan been Qcl Aux cl there
(Has Ivan been there?)
b. Knigata dali mu ja dadoxa?
book-the whether him(D) it(A) gave(3pl)
(Did they actually give him that book?)

On these grounds it is here believed that principle (X) and the assumptions accompanying it, including the structure (3), represents the overall best motivated analysis.

Principle (X) has some interesting consequences which link up major movements like topicalization and V-fronting with pro-drop. It might be suggested that pro-drop triggers these movements.

Data from subordinate clauses, to be discussed below, apart from validating (X), reveal some interesting complementarity relations between verb fronting and overt lexical complementizers, including wh-subordinators (cf. 1.6).

1.3 Distribution of Argument clitics - general principles

Argument clitics (irrespective of whether they occur in isolation or form a cluster) are distributed largely by the principles in (9); (B) has priority over (C), which in turn has priority over (A) - (A) serves as the default option if the conditions of both (B) and (C) fail:

(9)
(A) Argument clitics right-adjoin to FRONT.
(B) If Finiteness has a separate word-level exponent in the form of an auxiliary ('FIN' in (3)), and this FIN item is a clitic - *sum, si, e, sme, ste, sa* -, then argument clitics obligatorily right-adjoin to FIN.
(If FIN is a non-clitic auxiliary, then it is only optionally chosen as adjunction site, in accordance with (C)).

(C) If Finiteness does not have a separate exponent in the form of a clitic auxiliary (i.e., if there is no clitic FIN), but Neg, non-clitic FIN auxiliary, or the Future auxiliary serving as head of ModP is present, then the Argument clitics right-adjoin to either of these.

That is, argument clitic hosts are ranked in the following priority hierarchy (certain modifications and additions will be introduced as we proceed):

Clitic FIN	(by (B))
Non-clitic FIN/ Neg/ Fut.aux.	(by (C))
FRONT	(by (A))

The above principles are now discussed in turn. For the sake of clarity, from now on argument clitics will generally appear in bold italics in the examples illustrating principles of clitic placement and other relevant issues.

Principle (B) is illustrated in (10)a-c, and (d) illustrates the option in (C) of using the non-clitic FIN node as adjunction site:

(10)a. Az sŭm ***mu ja*** bil dal knigata
I Aux-cl(FIN) Arg-cl clust Aux(pp) given book-the
(I have had given the book to him)

b. *Az sŭm bil ***mu ja*** dal knigata
I Aux-cl Aux(pp) Arg-cl clust given(pp) book-the

c. Do utre šte sŭm ***ja*** pročel knigata
till tomorrow will Aux-cl(FIN) Arg-cl read book-the
(I will have read the book till tomorrow)

d. Pročel bih ***ja*** knigata
read(pp) would it(A) book-the
(I would read the book)

The modal auxiliary *šte* in (12)c might look a better Finiteness exponent, however its status in Bulgarian is different as compared to that of modal auxiliaries in Germanic and Romance, in the sense that they share most of the features of auxiliaries in general in these languages, i.e. bear certain tense (and agreement) inflections. *Šte* stands apart from tense auxiliaries and exhibits features discussed shortly.

The other options under (C), both applying when (B) fails, are illustrated as follows:

a) Negation serving as a clitic host is shown in (11) and (12a), (12) showing the free variation between Neg and non-clitic FIN:

(11)a. Az ne ***go*** vižda m
I Neg him see

b. Ne ***go*** vižda m
Neg him see(I)

c. Toj ne *ja* li bil kupuval knigata?
he Neg it Qcl Aux(pp) bought book-the
(Hasn't he bought that book?)

(12)a. Ne *ja* bjax čel knigata
not it had(I) read book-the
b. Ne bjax *ja* čel knigata
not had(I) it read book-the

In (11c), the finite auxiliary is dropped in a periphrastic tense.

Evidence for assuming that the clitic is adjoined to Neg in these cases, rather than simply left-adjoined to V-main (as is the general case in Romance), is that the question-clitic *li* can intervene between V-main and the Arg-clitic cluster in interrogative patterns (cf. (20)c below), but not between *ne* and the Arg-cl cluster ((20)a,b). Another clue that can be considered is that *ne* and *go* form a phonological unit.

b) In the periphrastic future tense Argument clitics right-adjoin to the future auxiliary.[4]

(13)a. Šte *mu go* pratja
will him(D) it(A) send(1s)
b. Kakvo šte *mu* pratiš?
what will him(D) send(2s)
c. Šte *go* viždaš li?
will him(A) see(2s) Q-cl
(Will you see him?)
d. *Šte li *go* viždaš?
will Q-cl him(A) see(2s)

The nature of the future auxiliary in Bulgarian is different from that of most other auxiliaries. It is noninflected and thus resembles the epistemic modal auxiliaries, with one difference, though. Normally, modal auxiliaries take an infinitival clause introduced by *da* and followed by a fully inflected 'infinitive'. The future *šte*, however, needs no overt subordinator of the *da* type. The status of both modal auxiliaries with *da*-incorporation and future *šte* could be understood under an assumption that they are exponents of a 'Modal' node, immediately dominated by NegP, which takes a proposition as its complement. In some cases *da* functions independently as an epistemic subordinator and then it occupies the third position in FRONT, the one usually taken by complementizers in main clauses (e.g. *dali* in 1.5 and 1.6), thus preceding Negation ((14)).

(14)a. Ivan da ne xodi tam!
Ivan comp Neg go there
(Ivan should not go there)

b. Ivan ništo da ne pipa!
Ivan nothing comp Neg touch
(Ivan should not touch anything!)

A similar view on the necessity for a Modal node and the items it can serve as likely locus for in the clause structure of the Balkan languages is expressed by Maria-Luisa Rivero (Rivero 1992b). A clue to the effect that argument clitics occur right-adjoined to the future auxiliary instead of adjoining to V-main is the ungrammaticality of (15)d, where the question clitic *li* has intervened between the possible host and the argument clitic *go*.

A slight modification concerning the priority relation between (C) and (A) will now be made. Both Neg and future *šte* (when occurring) take strict priority over FRONT as adjunction sites, in accordance with what we have already said, whereas in the presence of non-clitic FIN, it is still possible for FRONT to serve as adjunction site; this is illustrated in (16)b below. The structures in (15) illustrate different syntactic environments where principle (A) can be seen as operative. (15)a is an instance of an overt subject in FRONT (following from the discussion in the previous section), (15)b exemplifies verb fronting, whereas (15)c,d are subordinate clauses whose FRONT is occupied by a complementizer and a subject.

(15)a. Ivan ***go*** vižda
Ivan him sees
b. Vižam ***go***
see(1s) him
c. ... če Ivan ***go*** vižda
...that Ivan him(A) sees
d. ... če Ivan ***go*** bil vidjal
...that Ivan him(A) had(pp) seen(pp)

Right-adjunction to FRONT, as opposed to left-adjunction to V_{main} in cases like (15a-c) is difficult to test for the scarcity of exponents of functional categories and instances of major movements, such as topicalization, long head movement etc. in the simple tense constructions. However, general support for principle (A) is found in some dialectal variations (cf. (18) below) as well as in some re-narrated constructions ((15)d) and the cases of non-clitic auxiliaries, in which cases FRONT appears as eligible host-candidate, alongside FIN ((16)).

(16)a. Bih ***mu*** ***ja*** dal knigata
would(1s) him(D)cl it(A)cl given(pp) book-the
(I would read the book)
b. Pročel ***ja*** bih knigata
read(pp) it(A)cl would(1s) book-the

(16)a is an instance of non-clitic aux *bih* fronting, whereas (16)b exemplifies V-main fronting *pročel*. In both cases the respective constituents move to FRONT.

Apart from the absence of the factors mentioned in (C) and, especially, (M) below, there is also a condition of ranking preference concerning the application of (A). This preference is that when the structure contains a non-clitic auxiliary, the constituent in FRONT must be either a) a FIN item (i.e. the fronted auxiliary in (16)a), or b) subject (which is a constituent treated as originating in FRONT and not the result of topicalization, as is, e.g., the DO in (17)b), or c) a [+V] category, as suggested by the contrast between (16)b and (17)b.[5] An additional requirement for (A) to apply under option c) is that the argument clitics occur in isolation, as demonstrated by the grammaticality of (16)b compared to (17)a. This tendency, however, is sensitive to the choice of non-clitic auxiliary and, quite likely, to other, as yet unexplored factors.

(17) a. ??Dal ***mu ja*** bih knigata
given(pp) him(D) it (A) would book-the
(I would give him the book)

b. *Knigata ***ja*** bih pročel
book-the it(A) would read(pp)

Principle (A) can be seen as reflecting some residual 'Wackernagel' placement in Bulgarian which as an option is defined below as 'host-category irrespective'. Historically this was the rule for clitic placement in Old Bulgarian and still survives in the noun phrase, as well as in some dialects ((18)).

(18) a. ... і самъ сн несъі крстъ
...and himself refl(D) carrying cross
(... and carrying the cross by himself...) (Old Bulgarian)

b. ... і обрѣтъ ѥѧ вьзлагаетъ на рамѣ своі
and taking her(A) put(prt) on shoulders(dual) his
(and taking her, he puts her on his shoulders)

c. kuštata mi/novata mi kušta/xubavata mi nova kušta
house-the my/new-the my house/beautiful-the my new house

d. Gerdan i sūm kupil
necklace her(D) have(1s) bought
(I have bought her a bead necklace) (Western and South-East Bulgarian)

e. Majka *go* ne pušta
mother him(A) Neg letgo
(Mother doesn't let him go)

It is very likely that as syntactic structure changed in that FRONT took up more and more material, argument clitics would adjust by seeking hosts of a similar status, i.e. among the exponents of functional categories such as Finiteness, Negation and Modality.

The alternation between clitic adjunction to Neg and adjunction to FRONT can be related to the general principle (X), according to which either a lexically filled FRONT or the presence of Negation count as sufficient grammaticality requirement. Their general grammaticality complementarity is thus revealed to have consequences for their clitic host-eligibility, too.

A similar acceptability equivalence, it will be recalled (cf (16)), was exhibited in the case of non-clitic auxiliaries in the periphrastic tenses. In such environment argument clitics right-adjoin to either FRONT (in accordance with (A)) or the finite auxiliary (following from (C)). This oscillation in clitic placement options can be accounted for by a more general principle operative in all structures containing clitics, namely the principle of clitic clustering, spelled out in (M) below, as well as some preference for argument clitics to adjoin to a [+V] category.

1.4 The clitic-clustering placement option

Bulgarian is a language which has evolved full non-defective paradigms for argument clitics and present tense auxiliary clitics. In addition there exists a question clitic *li* . Thus a more general principle can be formulated to apply to all clitic types, namely:

(19) Principle (M)
If all functional categories in a construction, i.e. Finiteness, *li* and arguments are instantiated by clitics, then they will form a cluster, whose maximal structure is generally *li+Aux-cl+Arg-cl*.

This type of cluster right-adjoins to Negation, if present, or to FRONT, reflecting the priority and operation of principles (C) and (A), respectively.

The principle of clitic-clustering should be seen as an overall strategy of clitic placement across languages, according to which all clitic elements in a clause are bound to occur clustered together in a fixed order reflecting the respective hierarchy effects among the categories whose exponents the clitic elements represent.

In view of principle (M) one could possibly explain why argument clitics unambiguously right-adjoin to a clitic FIN, i.e., a finite clitic auxiliary, whenever such an element is present - that is, why principle (B) has the top priority among those in (9). In providing such an explanation, however, one has to address certain principled questions, such as whether a clitic can serve as host to another clitic and whether a cluster as a whole has a host. These questions lead into further principled issues like the definition of 'host', restrictions on the choice of hosts, etc. We leave these problems open at present, however some suggestions are made below

concerning the host hierarchy within and for a cluster, as well as some gradation in the 'attraction' (host) potential.

Viewing the principles (A), (B), (C), (M) and (X) together, the regularity (Z) follows as a consequence of these principles, illustrated in (20):

(Z) No clitic element can initiate a sentence.

(20)a. Ne *sŭm* ***ja*** čel tazi kniga
not have(I) it read this book
b. **Sŭm* ***ja*** čel tazi kniga

1.5 Question clauses

The following principles operate in question clauses:
(i) The FRONT position is open to more than one constituent, independently of whether the clause is a constituent or a yes-no question (marked with *li*). Typically yes-no questions involve fronting of the main verb and the presence of *li,* or an overt lexical complementizer *dali*. The opening of the FRONT position means that subjects no more has any blocking effect on V-movement to FRONT (from now on, all clitics, regardless of their category, are written in bold italics).

(21)a. Ti čel ***li*** ***si*** ***ja*** knigata?
you read Qcl have it book-the
b. Dali ***si*** ***ja*** čel knigata?
whether have(2s) it(A) read(pp) book-the
(Have you read the book?)

An important distinction between the yes-no structure type with *li* and the one with *dali* is that *li*-questions necessarily involve verb fronting ((21)a), whereas *dali* does not trigger any special movement of the main verb ((21)b). This could be partially explained in view of the function of *dali* as a special complementizer introducing question subordinate clauses, whose constituent order observes the constraints of declarative clauses, not question clauses ((22)).

(22) Popitax te dali ***si*** ***ja*** čel knigata.
asked(1s) you(A)cl whether have(2s) it(A) read book-the
(I asked you whether you had read the book.)

The fact that *dali* can be equally grammatically employed in both main and subordinate clauses is another evidence of the minimality in asymmetry between main and subordinate clauses in Bulgarian. It would appear highly incovenient with respect to Bulgarian clause structure to

regard *dali* main clauses as elliptical subordinate clauses with the main clause missing.

(ii) The question clitic *li* occupies a place in the clitic cluster which varies according to the type of structure. There are two main options:

a) when *li* initiates the clitic cluster which is adjoined to a multiply-filled FRONT ((21)a, (23)c); and

b) in the presence of Negation, *li* seeks a position inside the cluster, the strategy behind this re-ordering being one of 'spreading the load' of the cluster over a main (Neg) and a secondary host (*li*) ((23)-(25)). The plausibility of such a strategy is considered below.

(23) a. Ne ***ja*** ***li*** čete?
Neg it Qcl read
(Didn't you read it?)

b. *Ne ***li*** ***ja*** čete?

c. Ti čete ***li*** ***ja*** knigata?
you read Qcl it(A) book-the
(Did you read the book?)

(24) Ti ne ***si*** ***li*** ***ja*** čel knigata?
you Neg have Qcl it read book-the

(25) a. Ne si li ja kupuval knigata?
Neg have Qcl it bought book-the

b. Ne si li ja bil kupuval knigata?
Neg have Qcl it had(pp) bought book-the
Ne si li mu ja dal knigata?
Neg have(2s) Qcl him(D) it(A) given(pp) book-the

d. *Ne si li bil ja kupuval knigata?

e. Ne ***mu*** ***li*** ***ja*** dade?
Neg him(D) Qcl it(A) gave(2s)

f. *Ne li ***mu*** ***ja*** dade?

(23)a represents a simple case of pro-drop, with FRONT being empty, and absence of auxiliary clitic. As predicted by the principle spelled out as (C), in this case Negation acts as the host for the argument clitic, thus the resulting order Arg-cl+Q-cl.

With respect to clitic placement, question clauses respect the principles oulined so far, with the exceptions, or rather 'more complex' cases mentioned in (ii). In other words, the differences that arise could be seen as reflecting the distinction between a minimal (e.g. (23)a) and a maximal clitic cluster ((24), (25)). In a maximal cluster, where Finiteness has a word-level exponent and Negation is present, the order in the larger clitic cluster is Aux+li+Arg cl. That is, contrary to principle (B) above, in this case the Arg-cl cluster cannot right-adjoin to the finite auxiliary. An assumption that, in this case, the Argument clitics have 'dropped out' of

the cluster, would be ruled out, however, by constructions with more than one auxiliary (cf. (25)b). In these cases the status of the Arg-cl cluster as part of the larger cluster is unambiguously demonstrated by the impossibility to separate it from the rest of the larger cluster by an intervening non-clitic auxiliary (cf. (25)d).

The placement of Argument clitics in a maximal cluster can be described as dictated by principle (M), i.e. they seek a position in the larger clitic cluster. It could be suggested here that, to a certain extent, the order within the maximal cluster reflects the functional hierarchy of clitic elements in sentence structure.

What the examples in (25) might suggest, apart from some functional hierarchy effects, is that the Argument clitics in some maximal clusters can select a clitic host and thus adjoin to *li*, whereas the Aux-clitic adjoins to Neg ((25)b,c). This is especially the case with Arg-cl clusters present ((25)c), likewise in (25)e one of the Argument clitics can select Neg, whereas the other selects *li*. However, as pointed out in (ii) in this section, *li* can not attract the whole Arg-cl cluster and thus contend Negation ((25)f). It is also important that in (25)e the Argument clitics can occur only in the usual fixed order Dative - Accusative, and not vice versa.

In more structural terms this looks like spreading out the load of a maximal clitic cluster over a main host (i.e. Negation) and a secondary one (*li*). This reasoning might lead to interesting consequences when discussing the notion of 'host', namely suggesting that there could be 'main' hosts and 'minor' (in the sense of 'additional' or 'secondary') hosts.

Another possible explanation for the 'intervention' of *li* between the auxiliary and the Arg-cl cluster could be the need for *li* to incorporate in a verbal category (the finite auxiliary in this case). More on this view in Rivero 1992a.

1.6 More on FRONT in declarative and question clauses

Both declarative and question clauses in Bulgarian reveal relations of uniformity and complementarity in grammaticality requirements on FRONT. In the case of declarative clauses there is strict complementarity between topicalized constituents in FRONT and fronted verbs, which means that FRONT can be either unambiguously [+N] or [+V], respectively ((26)), cf. also 1.2 .

(26) a. Čel *sŭm* *ja* knigata
read(pp) have(1s) it(A) book-the

b. Knigata *sŭm* *ja* čel
book-the have(1s) it(A) read(pp)

c. *Knigata čel *sŭm ja*

d. Knigata az *sŭm* *ja* čel
book-the I have(1s) it(A) read(pp)

In (26)d there is both a topicalized direct object NP *knigata* and a subject NP - *az* in FRONT. The structure is grammatical since both are [+N] categories. What is impossible is the presence of two different categories ((26)c) which destroys the uniform category nature of FRONT as a whole.

No such strict categorial uniformity is witnessed in question clauses and epistemic modal main clauses (cf (16) above), to the extent that both [+N] constituents and [+V] constituents can co-occur ((27)a and b).

(27) a. Ivan dal *li mu e* knigata?
Ivan given(pp) Qcl him(D) has book-the
(Has Ivan given him the book?)

b. Knigata dali *mu ja* dadoxa?
book-the whether him(D) it(A) gave(3pl)
(Did they give him that book?)

c. Ivan kakvo dali ne *mu e* daval?
Ivan what whether Neg him(D) has given(pp)
(Whether what Ivan hasn't given him? emphatic)

d. *Ivan dali ne *mu e* daval kakvo?
Ivan whether not him(D) has given what

e. Koj kakvo na kogo dali*e* pokazal?/Ivan kakvo na kogo dali...
who what to whom whether has shown

f. *Ivan dali *e* pokazal kakvo na kogo?
Ivan whether has shown what to whom

The *dali-wh* questions in (27)c, e are by some authors analysed as 'echo' questions (cf. Rudin 1986). What is, e.g., in Germanic, considered a main distinction between regular wh-question structures and echo-questions is that in the echo-versions the wh-constituents remain in situ. However, as suggested by the ungrammaticality of (27)d and (27)f, in Bulgarian, even in 'echo' questions general constraints on multiple extraction have to be observed. The only 'peculiarity' is that they allow for both a yes-no question constituent *li/dali* and a wh-constituent. But so is the presence of a lexical complementizer *dali* in a main clause. This only supports the view that the construct FRONT in Bulgarian, introduced here, should be regarded as an appropriate analysis of clause initial structure (also see the section on Serbo-Croat). The important evidence from (27) is the 'opening' of FRONT in question clauses - to as many as 4 elements. Even as unruly as its structure may seem, there exist relations of complementarity between lexical complementizers and fronted verbs and wh-constituents and fronted verbs ((28)).

(28)a. *Ivan kakvo dal li mu e?
Ivan what given Qcl him has

b. *Ivan dali dal mu e knigata?
Ivan whether given him has book-the

The above complementarity could be accounted for by the fact that verb fronting is the unambiguous syntactic feature of yes-no questions, from what follows that it can not combine with the interrogative complementizer *dali*, which is a sufficient marker on its own, or for that matter a wh-constituent. The co-occurence of wh-constituents and *dali* is perhaps compatible due to the complementizer status of *dali* and the option for multiple wh-extraction from subordinate clauses.

In subordinate clauses FRONT excludes fronted verbs altogether and since it obligatorily contains a lexical complementizer, a relation of complementarity could be formulated to exist between verb fronting and overt complementizers, as also seen in question clauses above.

Judging from the complementarity relations found both in main declarative and question clauses and in subordinate clauses, a possible structure could be suggested for FRONT, as follows:

a) In declarative main clauses there are two places in FRONT if [+N] - one for Subject and one for a topicalized NP. As discussed above, when FRONT is [+V], only one place is available.

b) In question and modal main clauses FRONT has three available places - 1 (Subject), 2 (topicalized NP or wh-object cluster), 3 (complementizer). Places 2 and 3 conflate in the case of V-fronting (because of the complementarity discussed above), and thus accommodate a fronted verb.

c) In subordinate clauses FRONT has 3 places - 1 (complementizer), 2 (topicalized NP/Subject) and 3 (Subject/topicalized NP).

Thus the difference between complementizers in main and subordinate clauses is their place in FRONT - last and first, respectively. (When not all slots are filled, the relations of linear precedence still obtain as suggested.)

It appears from the analysis so far, that the steadfast members of FRONT are Subject in main declarative clauses, Subject-wh constituents in question clauses and complementizer in subordinate clauses. These are assumed to originate there, whereas the remaining constituents in FRONT undergo movement and are ordered according to their respective placement options.

2. Macedonian [6]

Macedonian will be discussed in view of the South Slavic parameter, i.e. the variation to be found among Bulgarian, Macedonian and Serbo-Croat. It will be also taken into account that both Bulgarian and Macedonian exhibit most of the features of the Balkan Sprachbund.[7] It will be argued that Bulgarian and Macedonian behave in exactly the same way with respect to a parameter here called 'clitic clustering', as contrasted to Serbo-Croat and Czech.

2.1 Types of clitic forms

a) pronominal clitics

	sg		plur	
	Acc	Dat	Acc	Dat
1p	me	mi	nè	ni
2p	te	ti	ve	vi
3pM	go	mu	gi	im
F	ja	ì		
N	go	mu		

Reflexive clitics

Acc	Dat
se	si

b) auxiliary clitics - present tense forms of 'be'

	sg	pl
1p	sum(su)	sme
2p	si	ste
3p	-	-

- conditional auxiliary *by*
- future auxiliary *ke*

c) question clitic *li*

2.2 Macedonian syntactic structure

Macedonian is here assumed to have the Bulgarian type of syntactic structure represented in (1) and (3), for subordinate and main clauses, respectively. The only difference between Bulgarian and literary Macedonian is the absence of principle (X) in Macedonian, namely that there is no requirement in Macedonian that FRONT be lexically filled. As will be seen below, this has consequences for the availability of syntactic movements, such as long head movement.

2.3 Clitic properties

Among properties of Macedonian clitics the following should be mentioned:

Clitic reduplication is obligatory in all the cases where it has been described as a preference (or a tendency) in colloquial Bulgarian (cf. Dimitrova-Vulchanova and Lars Hellan 1991), namely:

a) a DO instantiated by a full pronominal form ((29)a)
b) a definite DO (either a DP or a proper noun) ((29)c and b)
c) an indirect object ((29)e).

(29)a. *Go* vidov nego
him(cl.) saw(I) him
(I saw him)

b. *Ja* vidov Marija
her(cl.) saw(I) Maria
(I saw Maria)

c. *Ja* vidov ženata
her(cl.) saw(I) woman-the

d. Vidov ubava devojka
saw(I) beautiful girl(indef.)

e. *Im* dadov na decata knigi
them(cl.) gave(I) to children-the books
(I gave books to the children)

The placement of clitics follows the following principles (A') and (B'), corresponding in content and relative priority to (A) and (B) in Bulgarian, such that (B') has precedence whenever it can apply:

(A') Arg-clitics right-adjoin to FRONT

This is illustrated in (30) below:

(30)a. Na četiriesette godini sudbata *mu* beše opredelila da *se* preženuva
at forty-the years fate Arg cl had destined Comp refl cl re-marry
(At forty fate had decided for him to remarry(refl))

b. Zima *ja* imaše pritisnato Struga
winter it(A) had clenched(pasp3sneut) Struga
(The winter had clenched Struga(a town))

In (30)a FRONT is occupied by an adverial PP and a subject NP, with the Arg-cl *mu* right-adjoined to it, likewise in (30)b the Argument clitic *ja* right-adjoins to the subject NP *zima* in FRONT. (30)b is an example of the specifically (Western) Macedonian periphrastic perfective construction (cf also Tomic 1989) comprising an inflected form of non-clitic auxiliary 'have' and a 3neuter passive participle form of V-main. (30) also represents conditions similar to those in the Bulgarian non-auxiliary cases (cf (10)c).

It appears that right-adjunction to FRONT in Macedonian is far more compelling than the corresponding Bulgarian principle. Virtually, it represents the option for clitic placement in all cases (to be discussed shortly), except for larger clitic clusters (i.e. (B')).

(B') Arg-clitics right-adjoin to the clitic Auxiliary which is the exponent of Finiteness. This larger clitic cluster is hosted by Negation, if Negation is present.

This is illustrated in (31):

(31)a. Jas ***sum*** ***mu*** ***gi*** zel parite
I aux cl him(D) them(Acc) taken money-the
(I have taken the money from him)

b. Ti ne ***si*** ***mu*** spomožil
you Neg aux cl him(D) helped
(You haven't helped him)

c. Ne ***'ke*** ***sum*** ***mu*** ***go*** daval
Neg fut aux pr aux him(D) him/it(Acc) given
(I wouldn't have given it to him (future renarrated Mood))

2.4 The scope of (A')

Here some instantiations of principle (A') are discussed.

It has been assumed in the literature (Spencer 1991) that Arg-clitics in Macedonian right-adjoin to V-main when it occurs in a) an imperative form or b) an active present participle form, as exemplified in (32).

(32)a. Daj ***mu*** ***go***
give him(D) it
b. Davajki ***mu go,...***
giving him it,....

However, it can be argued that in cases when Arg-clitics appear as if they are adjoined to V-main, it is not V-main as such that Arg-clitics adjoin to, but rather they right-adjoin to the constituent in FRONT, which happens to be a [+V] category. Thus, these constructions are within the scope of (A'), both examples in (32) thus being cases of V-fronting.

It should be noted that V-fronting is far more restricted in Macedonian than in Bulgarian. Bulgarian V-fronting follows the rule: 'Both main verbs and non-finite auxiliaries can front, if necessary by-passing more than one head.' In its capacity of bypassing verbal heads, this rule has been referred to as *long head movement*. In Macedonian, V-fronting lacks this possibility, and it is restricted to constructions of the type (32)a and (32)b.

There exists an apparent counterexample to the suggested generalisation concerning (32), namely negation constructions in the imperative as another grammatical context for Arg-cl right-adjunction to V-main (33).

(33)a. Ne grižete/bespokojte ***se***
Neg care/worry refl.cl
(Don't you worry)

b. Ajde ne zemi ***go***
let Neg take it(Acc)

(Don't you take it (or 'If you don't take it'))

However, it will be recalled here that Negation was described as having a blocking effect on V-fronting in Bulgarian, and it may be assumed that the same holds true for Macedonian. The evidence is somewhat limited, however, since the constructions in (33) represent the only case of V-fronting and, generally, in the absence of long head movement, blocking effects can not be easily checked. Negation in Macedonian seems to enjoy the same structural status as in Bulgarian, being an independent node high up in sentential structure. This conclusion is corroborated by examples of larger clitic clusters, in which Neg can host the larger clitic cluster (i.e. a cluster including aux-clitics (31)b,c). The difference from Bulgarian, however, is that Neg in Macedonian never acts as adjunction site for the Arg-cl cluster alone, even by default ((33)).

If other imperative patterns are taken into consideration ((34)) of the type 'COMP + V-main(Tense present)' ((34)a,b,c,d) or 'V-main(Tense past)' ((35)), Arg-clitics seem to exhibit an oscillation with regard to adjunction site.

(34)a. Da prostiš ***me***!
Comp forgive me(Acc)
(Forgive me! (Sorry))

b. Da kažat ***mu***!
Comp say him(D)
(Let them tell him)

c. Da ***go*** oslobodime!
Comp him free
(Let's free him)

d. Da ***ja*** pratime, da ***gi*** izmoli
Comp her send Comp them beg
(Let's send her to beg them)

e. Neka ***mi*** donese mene tate edno topce
let me(D) bring me father one ball
(Let my father bring me just one ball)

(35) Dal ***ti*** Gospod dobro!
gave Arg cl God good
(Let God give you good)

This oscillation can be analysed by acknowledging some further distinctions between Bulgarian and Macedonian in the properties of negation and constraints on V-fronting, as follows.

In (35) and some of the cases in (34) - c,d,e, the placement of Arg-clitics follows from (A'). The 'deviant' constructions ((34)a,b) could also be seen as a consequence of (A'), provided both Negation and the overt complementizer *da* are assumed as 'vehicles' to V-fronting. It appears that, in view of the quite limited possibilities for V-fronting in Macedonian, some enhancement is provided by constituents generated sufficiently high in syntactic structure, such as Negation or overt complementizers. In Macedonian it seems possible for V-main to incorporate in either Negation or a complementizer and thus front further. The 'V-into-Neg' incorporation phenomenon is well known in languages like Serbo-Croat and Czech, discussed below, where a negated auxiliary or a main verb are licensed for fronting, including long head movement, simply because they move with Negation, as opposed to crossing Negation. It turns out, then, that Macedonian employs an option available mainly in West Slavic, where Negation is considerably low in syntactic structure (cf. section 4.) as well as in Serbo-Croat (a phenomenon which can be described as the 'excorporation' or 'decliticization' of clitic auxiliaries, cf. 3.). In terms of syntactic strategy this seems like the equivalent of the saying 'If you can't beat them, join them': If Negation or a constituent in FRONT can not be crossed, they can be employed as the vehicles which allow main verbs in FRONT after incorporation. In view of this assumption the deviant cases are actually regular Macedonian V-fronting constructions in accordance with the general constraints on V-fronting in this language. Thus the Arg-cl placement in them can be described as directly following from (A').

2.5 Clitic clustering

Macedonian, like Bulgarian, employs the more general option for clitic placement (formulated in (M)), namely that of forming a larger clitic cluster. So, the Bulgarian principle (M) is found operative in Macedonian with one insignificant difference. Macedonian large clitic clusters include the future aux-clitic *ke* and the conditional *by*, in their respective Modal node position under Negation. The fixed order in the cluster is 'fut/cond aux + Aux + Arg-cl'. (31) is a good exemplification of clitic clustering phenomena in Macedonian.

Since, originally, (31) was used for the sake of illustrating principle (B'), namely that Arg-clitics right-adjoin to the aux-cl which is the exponent of Finiteness, one of the problems of this analysis becomes apparent immediately and requires some discussion here.

The problem is that the absence of long head movement in Macedonian renders impossible a definitive conclusion about the relationship between Arg-clitic clusters and functional category(ies), since Arg-clitics never actually get separated from V-main.

If seen in comparison to the Bulgarian principle (B), the Macedonian facts can only represent a default case of the Bulgarian principle, since its validity can be tested in two cases - i) in the presence of

more than one auxiliary, and ii) in V-fronting constructions in which V-main moves to FRONT. In Bulgarian in both i) and ii) cases the Arg-cl cluster was shown to be independent of and separated from V-main, in right-adjoining to the finite auxiliary in i) and ii), and in not moving with V-main in ii). Both tests fail for Macedonian due to properties discussed above, as well as the nature of analytical tenses in Macedonian. The complex re-narrated mood form consisting of two auxiliaries, one of which non-finite, typical of Bulgarian, is non-existent in Macedonian, i.e. there is no auxiliary non-marked for finiteness intervening between V-main and the finite verb. Also, the other patterns with more than one auxiliary all consist of a modal auxiliary non-marked for agreement or tense and a finite auxiliary in the present tense. This then, means, that there is no sure test as to whether the Arg cl cluster is attracted by a functional and not a lexical (V-main) category (as e.g. compared to the problems in adequately defining the category which decides the placement of Argument clitics in Romance, see Kayne 1991 and Rouveret 1992). The only evidence provided by structures of the (36) type is negative - that the Arg-cl cluster is not attracted by Modality.

(36)a. *By* *ste* *mu* kažale!
aux-mod aux-fin Arg-cl(D) said
would are(2p pl) him said
You would have told him (but you didn't)! (reproach)

b. *By* *si* *go* čuvala!
aux-mod aux-fin Arg-cl(Acc) watched
would are(2p sg) him watched
You ought to have watched him!

Despite the uncertain evidence from above, principle (B') will be assumed valid for one main typological (and genealogical) reason, namely that in Slavic there is no evidence of the existence of the 'highly specified host' option for clitic placement, according to which Arg-clitics show a high selection for host-category, e.g. adjoining to V-main, which is here considered to be the case in some Romance languages ((37)).

(37)a. Levá-lo-ei (European Portuguese)
raise (I) Arg-cl(A) Aux(fut)
I will raise it

b. Mostra-no-los-á
show Arg-cl(D) Arg-cl(A) Aux(fut)
he will show them to us

c. Spusu-mi-s-a! (Rumanian)
told Arg-cl refl-cl clAux
Was I ever told!

Macedonian also represents an extended version (cf. part II.) of the 'clitic clustering' option, which is most prominent in Bulgarian among the Slavic languages. As will be argued below, clitic placement for each language will basically follow one of three options, namely:[8]

1) adjunction to a highly specified host,
2) adjunction to a category-irrespective site, and
3) finding a place in a larger clitic cluster (clitic clustering).

These are not, however, in a complementary distribution and it may be the case that the predominant mode of clitic placement in a language combines with one other mode as the result of diachronic factors (i.e. the evolution of the clitic paradigm and possible changes in language type). Macedonian is an exemplification 'par excellence' of the above prediction, since historically it has passed through a clitic-second (Wackernagel) phase, defined below (cf sections 3. and 4.) as the 'host-category irrespective' option for clitic placement, just like most other Slavic languages. This is reflected in the general availability of FRONT as a host (cf. (A')). So, presently Macedonian combines two modes of clitic placement - clitic clustering and adjunction to a highly non-specified host, the former greatly due to the analytical developments in the languages of the Balkan Sprachbund (cf. 1. Bulgarian).

Even though Bulgarian represents a more complicated case from the point of view of clitic placement strategies, by distinguishing between principles for Argument clitic clusters and principles that apply to maximal clitic clusters, it resembles Macedonian typologically in that it selects the same two overall strategies. That is, alongside the clitic clustering placement option, one could recognize in Bulgarian the option for adjoining to a category-irrespective site, valid in the case of maximal clitic clusters - in Bulgarian maximal clusters right-adjoin to FRONT, unless Negation is present. The possibility of recognizing analytically the former as an exponent of the option for adjoining to a category-irrespective site depends on the treatment of notions like 'adjoin', 'host' etc. A general point to be considered is whether the concept of 'adjoining to a host' should be reserved only to the relationship between one constituent acting as a host and one other category-non-heterogeneous item, i.e. a clitic or a clitic cluster of the same category type (e.g. Argument clitic clusters). Another option is to extend it to cover the relationship between single host constituents and what are here referred to as maximal clitic clusters (i.e. clusters comprising different clitic types - auxiliary, argument, question clitics etc.). So far the issue has not been addressed in the literature on Slavic, very likely due to the assumption that a clitic cluster is 'a clitic cluster', i.e. represents the same grammatical classificational category, even though the components of the cluster may not be of the same functional status.

2.6 Requirements on FRONT and V-fronting and clitics

Macedonian looks strikingly different from the other Slavic languages in that clitics and clitic clusters can occupy clause initial position. However, the contrast between Bulgarian and Macedonian in this respect could be described as a consequence of the presence and absence, respectively, of principle (X) (" If Negation is empty FRONT must be lexically filled"). The clause-initial possibility for clitics is actually an instance of right-adjunction to FRONT; however, since in Macedonian there is no grammaticality requirement that FRONT must be filled, if FRONT is empty, clitics can occur in clause initial position, as exemplified in (29).

The requirements on FRONT, as described for Bulgarian, have consequences for syntactic movements, such as topicalization and V-fronting. The same applies to Macedonian, especially in the case of V-fronting constraints. The absence of long head movement could be seen as following from, among other reasons, the absence of principle (X). Otherwise, seen in isolation, it would seem striking that Macedonian has one property (clause initial clitics) and lacks one (long head movement), in which it contrasts the rest of Slavic. In view of general constraints on Slavic syntactic structure, the only reason for both features of Macedonian are the language specific requirements on FRONT.

3. Serbo-Croat

3.1 Types of clitic elements

i) Argument clitics:

	Acc	Gen	Dat
1sg	me	me	mi
2sg	te	te	ti
3M	ga	ga	mu
F	ju,je	je	joj
N	ga	ga	mu
1pl	nas	nas	nam
2pl	vas	vas	vam
3pl	ih	ih	im

Reflexive clitic: *se*

Argument clitics in Serbo-Croat have a paradigm only for the Genitive, Accusative and Dative (as opposed to full pronominals which distinguish in addition Nominative, Vocative, Instrumental and Locative forms). A peculiarity of Serbo-Croat is that Accusative clitics can be used as constituents in PPs (unlike Bulgarian):

(38) Majka je ovo za *te* spremila
mother has this for you(cl) prepared

ii) Auxiliary clitics:
a) The verb for 'be', with a full paradigm for Tense present corresponding to the full paradigm of full forms (which have a restricted distribution):

full forms	clitics
1s jesam	sam
2s jesi	si
3s jest	je
1pl jesmo	smo
2pl jeste	ste
3pl jesu	su

b) The future auxiliary:

full forms	clitics
1s hoću	ću
2s hoćes	ćes
3s hoće	će
1pl hoćemo	ćemo
2pl hoćete	ćete
3pl hoće	će

Hence, one of the differences between Bulgarian and Macedonian on the one hand, and Serbo-Croat on the other, is that in Bulgarian and Macedonian there are no full auxiliary equivalents for Tense present and Future. Also, the future auxiliary (short form) in Serbo-Croat is a clitic.

iii) Question clitic *li*

3.2 Serbo-Croat clause structure

There exists an important difference between Bulgarian and Macedonian as opposed to Serbo-Croat with respect to clause structure. As was argued in 1.3, the status of Bulgarian *da* is different from that of regular complementizers in that it does not introduce real subordinate clauses. Even if classified as some type of complementizer, the suggestion is that *da* belongs to main-clause complementizers, alongside *dali* and Norwegian *som* in its use in main clauses in Mid- and North-Norwegian, as exemplified in (39). In Serbo-Croat, however, *da* functions as a fully-fledged complementizer introducing subordinate clauses, on line with wh-subordinators. The differences in its status can be easily checked by the placement of clitics in such clauses. The clitics originating in the main clause seek the main clause second position (cf. 3.3 for details), whereas the clitics originating in the subordinate clause, introduced by *da* seek the

respective clause second position, i.e., adjoined to the complementizer ((40), also (44) below).

(39) Kæm som kom?
who that came
(Who came?)

(40)a. Želim da ***mu*** ***ga*** dam
want(1s) compl. him(D) it(A) give(1s)
(I want to give it to him)

b. Radujem ***se*** sto ***je*** rekao "napred"
glad refl cl that is said "forward"
(I am glad that he said "Come in")

c. Da ***li*** ***ste*** rekli da ***ce*** ***mi*** trebati pet sati?
comp Q cl are(2pl) said compl fut aux me(D) need(3pl) five hours
(Did you say that I will need five hours?)

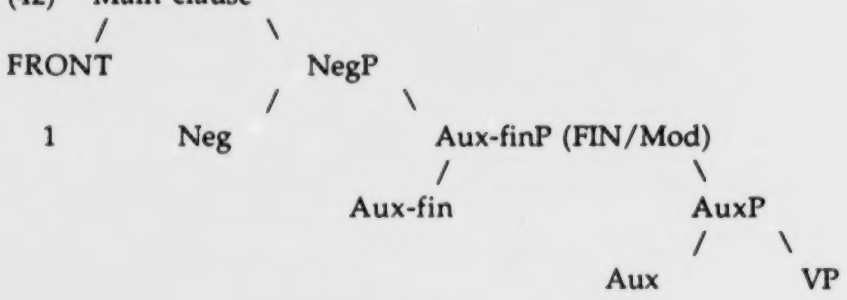
The status of *da* affects the analysis of constructions with modal auxiliaries in Serbo-Croat. There are two options - modal auxiliaries either take a *da*-subordinate clause, in which case the above analysis applies, or they are used with an infinitival form of V-main, unlike Bulgarian and Macedonian. In the latter case the construction should be analysed as one main clause, confirmed by the clitic placement ((41)).

(41)a. Želim ***mu*** ***ga*** dati
want(1s) him(D) it(A) give(inf)
(I want to give it to him)

b. Ja ***mu*** ***ga*** želim dati
I him(D) it(A) want(1s) give(inf)

The difference between (40)a and (41) is that in (41) the Arg-cl cluster finds the clause second position, irrespective of the category of the constituent in FRONT (cf. 3.3 below). So, there is no evidence of clitic-climbing, as suggested by Spencer (Spencer 1991: 357), since the *da*-clause option and the infinitive option with modal auxiliaries in Serbo-Croat are simply different construction-types, despite their functional identity - in the former case there are two clauses (main and subordinate), whereas in the latter there is just one clause (on a similar view see Progovac 1991, footnote 2). Since the *Aux-mod+infinitive* option is analysed here as basically the same as any other periphrastic tense, no separate nodes for Finiteness and Modality will be assumed for Serbo-Croat (unlike Bulgarian and Macedonian), as represented in (42).

(42) Main clause



3.3 Options for clitic placement

3.3.1 Some facts

The facts to be considered are divided into four groups a)-d).

a) As is well known, the following principle can be seen as crucial in the linear ordering of clitics in Serbo-Croat: Both clitic clusters and clitics occurring singly take the second position in the sentence, i.e. the so-called Wackernagel position, independently of whether the clause is declarative or interrogative main ((43)) or subordinate ((44)).

(43)a. Sad *ga* *ne* vidim
now him Neg see Ip

b. Koliko *im* ko daje?
how much them who gives

c. Da *li* *su* automobili na putu?
C Qcl Aux-cl cars on the road

(44)a. ... da *me* *je* Ivan vidio
that Acc-cl Aux-cl Ivan seen
(that Ivan saw me)

b. ... da *ga* *je* rado Ivan pio
that Acc-cl Aux-cl gladly Ivan drunk
(that Ivan enjoyed drinking it)

c. *... da Ivan *me* *je* vidio

d. *... da rado *ga* Ivan pije

A syntactic interpretation of the placement in 'Wackernagel' position is discussed below (3.3.2) and an alternative analysis is suggested.

What counts as first element in main clauses is subject to variation, (cf. Anderson 1991, Ćavar and Wilder 1992). It can be either the first word in the sentence ((45)a) or the first maximal projection ((45)b).

(45) a. Taj *mi* *je* pesnik napisao knjigu
this me(D) Aux cl poet written book(Acc)
(That poet has written a book for me)

b. Taj pesnik *mi* *je* napisao knjigu

this poet me(D) Aux cl written book(Acc)
(That poet has written a book for me)

In their analysis, Ćavar and Wilder seek a regularity behind the facts in (45) by attributing the grammaticality of (45)a to a general property of Croat, namely the general possibility for 'left-branch' extraction out of NPs. Some of the examples they quote are in (46).

(46)a. Zeleno *je* Ivan kupio auto
green clAux Ivan bought car
(Ivan has bought a green car)

b. Tatino *je* Ivan razbio auto
father's is Ivan broken car
(Ivan has broken father's car)

c. Cije *je* auto Ivan razbio?
whose is car Ivan broken
(Whose car has Ivan Broken?)

The authors proceed to suggest that the above are not thus cases of clitic 'breaking-up' of the NP (as suggested by Spencer 1991: 355) and exist in Croat 'quite independently of questions of clitic placement'. It appears, however, that the only cases when left-branch extraction of this type can be demonstrated, and does actually occur, are indeed constructions with clitics. Perhaps this property of Croat can be seen alongside major syntactic phenomena, such as topicalization and V-fronting, which are employed in a systematic way, with varying degrees across Slavic. Whatever the triggering relationship, i.e. whether these movements are triggered by the presence of clitics or not, syntactically they belong to a more general mechanism of fronting constituents and it is possible that they might have a common cognitive and teleological background. We leave this issue open, for the time being.

b) The ordering within the larger clitic cluster is Qcl+Aux+Arg-cl.

(47) Da ***li su se*** videli?
C Qcl Aux refl see(pp)
(Have they met/seen each other?)

c) With respect to Negation, Serbo-Croat exhibits the following difference from Bulgarian: NegP is lower down in the structure of Serbo-Croat sentences. It is a node immediately dominating the finite verb phrase, and the finite verb moves to incorporate with the head Neg of NegP. Consequently, in the presence of Negation, Arg-cl clusters retain their sentence-second position, whereas the auxiliary (e.g. nisam in (48)b) can be analysed as being denied a place in the larger clitic cluster and having lost its clitic status, once incorporated with Negation.

(48) a. Ja sam mu se predstavio
I have Arg-cl refl cl introduced(pp)
(I have introduced myself to him)
b. Ja mu se nisam predstavio
I Arg-cl refl cl NegAux pp
c. Ja mu ga dajem
I Arg-cl give
(I give it to him)
d. Ja mu ga ne dajem/neću dati
(I don't/won't give it to him)

In both languages, however, the blocking effect of Negation regarding V-fronting obtains.

(49) *Predstavio ***mu se*** nisam

However, as pointed out in relation to Macedonian, finite verbs are allowed fronting after incorporation with Negation ((50)).

(50)a. Nisam ***ga*** danas video
Neg+aux(1s) him(A) today seen
(I haven't seen him today)
b. Ne vidi ***ga*** Ivan
Neg see(3s) him(A) Ivan

d) In relation to V-fronting, it should be pointed out that Serbo-Croat has more constraints than Bulgarian by allowing long head movement only for the second high [+V] category ((51)a,b).

(51)a. Bili ***su*** ćitali knjigu
had(pp) are(aux-fin) read(pp) book(A)
(They have read the book)
b. *Ćitali ***su*** bili knjigu
c. Ćital ***sam*** knjigu
read(pp) am(aux-fin cl) book(A)
(I have read the book)
d. *Ćital jesam knjigu
read(pp) aux(non-cl) book(A)

Another constraint is that non-finite verbs moving to FRONT can only cross clitic finite auxiliaries ((51)c) and not the full auxiliary form ((51)d).

3.3.2 Placement in the 'Wackernagel' position

The 'Wackernagel' or second position in linear order are quite unsatisfactory terms when it comes to syntactic analysis. In their recent

analysis of clitics in Croat, Ćavar and Wilder (Ćavar and Wilder 1992) interpret the traditional placement in 'Wackernagel' position for clitics as right-adjunction to C°, their main evidence for strict adjunction coming from subordinate clauses (cf (44)), in which clitic clusters right-adjoin to the lexical complementizer and no other constituent can intervene between the complementizer and the clitic cluster ((44)c,d). However, what these examples instantiate is not clear. The fact that no constituent can follow the overt complementizer in subordinate clauses and thus intervene between the complementizer and the clitic cluster can be just as well taken as evidence about the structure of Serbo-Croat FRONT in subordinate clauses, namely that, unlike Bulgarian, it can contain only one constituent. This observation turns out to apply to Serbo-Croat main clauses as well ((52)).

(52)a. *Ivan vidi ***ga***
Ivan see him
b. *Ivan nije ***ga*** vidio
c. *Rado nije ***ga*** vidio
gladly Negis him seen
d. *Rado vidio ***ga je*** Ivan

Another ambiguity, arising from Ćavar and Wilder's analysis, is the assumption that clitic clusters right-adjoin to C° in main clauses, even when it is empty. However, in this case, the clitic cluster actually appears phonologically adjoined the element in CP-Spec. The problem seems to follow from their strict distinction between CP-Spec and C° , and elements that can move to the two sites, respectively.

An alternative analysis is suggested here in line with previous analysis for Bulgarian and Macedonian, which aims at a generalization over clause-initial structure in Serbo-Croat and an interpretation of placement in the 'Wackernagel' position for clitic clusters. The reason for seeking congruent solutions for Serbo-Croat is the aim at establishing a South-Slavic parameter with respect to syntactic structure in general and clitic placement in particular. The assumption is that all three languages share a comparable and thus parametrizable syntactic structure and that the similarities exceed the differences.

Ćavar and Wilder argue that in Croat main clauses either CP-Spec or C° can be filled. According to them constituents that move to CP-Spec are topicalized NPs and VPs, as well as wh-constituents ((53)a,b,c), whereas C° is reserved as landing site for lexical complementizers and verbs that undergo long head movement ((53)d,e). Constructions with both CP-Spec and C° lexically filled are ungrammatical ((52)).

(53)a. Damira ***sam*** vidio
Damir(A) am seen(pp)
(I have seen Damir)

b. Dao knjigu *mi* Ivan nije
given(pp) book(A) me(D) Ivan isn't

c. Šta *li je* vidio?
what Qcl is seen
(What has he seen?)

d. Vidio *ga* *je*
seen(pp) him(A) is
(He has seen him)

e. Da *li* *ga* Ivan vidi?
compl Qcl him(A) Ivan see
(Does Ivan see him?)

If this complementarity between CP-Spec and C° is valid and if for the sake of clitic clusters it makes no difference which of the two is lexically filled (according to Ćavar and Wilder long head movement in Croat is triggered by a PF requirement that overt non-clitic material precede the clitic cluster in C°), then why argue that:
1) there are two distinct syntactic positions in clause initial structure and
2) it is exactly C° that clitics right-adjoin to?

Because of this complementarity in main clauses and the impossibility of expanding clause initial structure in subordinate clauses (cf 3.3.1), it is argued here that Serbo-Croat clause initial structure can be analysed in terms similar to the analysis for Bulgarian and Macedonian, i.e. by employing the FRONT construct. In Serbo-Croat there is additional justification, namely that it can only have one constituent at a time both in main and subordinate clauses (contrary to Bulgarian and Macedonian). Thus the following principle could be suggested to apply to Serbo-Croat syntactic structure:

(54) Principle (Y):
FRONT must be filled and can have only one element.

What follows from this assumption is a principle for clitic placement (F).

(55) Principle (F):
Both clitics occurring singly, and clitic clusters, right-adjoin to FRONT.

As already demonstrated, FRONT can contain material non-specified for category. The element in FRONT can be of verbal, substantival or adverbial nature. Since clitics invariably adjoin to FRONT, the option for clitic placement in Serbo-Croat is here defined as 'adjunction to a category-irrespective site' (cf. 2.5).

Thus, what is one of the options for Arg-cl placement in Bulgarian (cf. (A)) and an alternative option in Macedonian (cf. (A')), appears as the

only option in Serbo-Croat. This can find explanatory support both historically and typologically. Placement in the 'Wackernagel' position, or in our terms right-adjunction to FRONT, used to be the grammatical option for clitic placement all across Slavic historically. Serbo-Croat is the most 'conservative' South-Slavic language by retaining categories like the infinitive, case in substantives, as well as irregularities in the paradigm of Aspect. On the other hand Bulgarian and Macedonian have developed a number of analytical features in line with the other languages in the Balkan Sprachbund, thus replacing the traditional Slavic categories. Then, the suggestions for clitic placement principles are congruent with the overall typological tendencies in the languages under discussion, namely that, as expected, Serbo-Croat observes a more rigid rule for clitic placement, reflecting an earlier stage in diachrony.

4. Czech

4.1 Types of clitics
Czech has the following types of clitics:

i) Argument clitics, with a paradigm parallel to that of full pronominal forms

	Full pronominals	Clitics
	Acc Gen Dat	Acc Gen Dat
1sg	mne/mne/mne	me/me/mi
2sg	tebe/tebe/tobe	te/te/ti
3 M	jeho, neho, nej/jeho/jemu	ho, (jej)/ho/mu
F	ji/jí/jí	ji/jí/jí
N	je/jeho/jemu	ho/ho/mu
1pl	nas/nas/nam	nas/nas/nam (unstressed)
2pl	vas/vas/vam	vas/nas/nam (unstressed)
3pl	je/jich/jim	je/jich/jim (unstressed)

Reflexive clitics: *se, si*

ii) Demonstrative pronoun: *to*

iii) Auxiliary: *by*, present tense forms of 'be' *(j)sem*

4.2 Czech syntactic structure and clitics
We here make the following points:
a) With respect to topicalization and long head movement- phenomena Czech syntactic structure is very similar to Serbo-Croat. It is assumed here

that both principles (Y) and (F) apply to Czech, namely that FRONT can only have one element and clitics right-adjoin to it ((56)).

(56) a. Mela ***by*** ***se*** rikat pravda
Mod Aux Fin Aux refl cl talk(inf) truth
(Truth should be spoken)

b. Musim ***to*** uznat
must this know(I)

c. Ma ***te*** Jan rad?
has Arg-cl Jan gladly
(Does Jan like you?)

b) NegP, however, is even lower than NegP in Serbo-Croat. Its head is invariably a prefix which generally *incorporates with the Agreement-bearing verb immediately below the finite auxiliary* (also cf Rivero 1991). It should be noted here that Agreement in Slavic is a category which gets marked on all verb forms (even the non-finite ones) except for infinitives. This, consequently, justifies the use of 'Agreement-bearing' to apply accordingly. According to the principle from above, it will be mainly V-main (both in a finite and a participial form), which incorporates in Negation ((57)a).

One of the consequences of the above principle is that in the case of 'modal auxiliaries+infinitive' patterns, it is the modal auxiliary which incorporates in Negation, since infinitives do not count as Agreement-bearing in Slavic (they are non-inflected forms) ((57)b, (58)).

(57) a. Neznam toto slovo.
Neg know this word

b. Ohen ***se*** tam nesmel rozdelavat
fire refl cl there Aux-Mod make (inf)
(Fire should not be made there)

(58) a. Nemelo ***by*** ***se*** lhat
NegAux-Mod Aux-cl refl cl lie (inf)
(One should not lie(conditional))

b. Nemel ***jsi*** ***ho*** urazet
NegAux-Mod Aux-cl Arg-cl offend
(You shouldn't have offended him)

c. Nevidel ***jsem*** ***te*** cely den
NegV-main Aux Arg-cl all day
(I haven't seen you the whole day)

d. Ja bych nemohl jet s nimi
I would NegAux-Modpp go(inf) with them

The sentences in (58)a,b,c also exemplify fronting phenomena in Czech (or 'long head movement' in the sense of part I.2.) and their interdependence

with Negation.

Like in Serbo-Croat and some of the Macedonian cases, a verb can front, provided it incorporates with Negation. These are the only grammatical constructions with long head movement in the presence of Negation, which may indirectly suggest that Negation has the same blocking effect on V-fronting in Czech, too. Otherwise, like in Serbo-Croat, fronting is constrained to the first non-finite verb to the right of the finite auxiliary (59), defined by Cavar and Wilder in connection with Croat as a strict locality condition.

(59)a. Byl bych koupil knihy
would(pp) would(fin) bought(pp) books
(I would buy books)

b. *Koupil bych byl knihy

If Negation attaches to V-main, then the order is Aux-cl+Arg-cl+V.

(60) Jeste *jste ho* neprodal?
yet Aux Arg-cl NegV-main(pp)
(Haven't you sold it yet?)

c) Czech and Slovak distinguish between forms of 'be' when used as auxiliaries, in which case they are clitics, and the copular 'be' (61), which syntactically does not have clitic behaviour (also cf Toman 1981), a basic distinction being possibilities for fronting, which are unavailable in the case of clitic auxiliaries ((62)).

(61) a. *Je to* pero?
is this pen (Czech)

b. *Je to* dobre aj s tou zaplatou
is it good even with this patch (Slovak)

c. *Jste* doma?
are(you) home (Czech)

(62) *Bych byl koupil knihy
would(fin) would(pp) bought books

PART II. FURTHER REGULARITIES AND PARAMETERS OF VARIATION

1. Negation

Slavic differs from Germanic with respect to the grammatical realization of Negation. All Slavic languages exhibit the so called double negation (cf. Jespersen 1924), i.e. both the subject or direct object and the predicate can be negated. This can be partially explained by the pro-drop features of Slavic - negation operates separately (and independently) on subject and predicate. In the majority of cases it is sufficient to negate the predicate (in the absence of a phonologically realized subject) ((63)a,b); if subject is present and represented by a negative lexical item then clause negation is activated (in Serbo-Croat obligatorily (cf. Progovac 1991 for a formulation of the reverse licensing relationship), in Bulgarian optionally) ((63)d and c).

(63)a. Ne rabotja
Neg work (ls)
(I don't work) (Bulgarian)

b. Neće više orati ovu njivu
Negwill more plough(inf) this field(A) (Serbo-Croat)
(You won't plough this field any more)

c. *Nikoj njama* da doide
nobody Negwill come (Bulgarian)

d. *Niko neće* doci
nobody Negwill come (Serbo-Croat)

The comparison between Bulgarian and Serbo-Croat shows that Negation is to be assigned a different functional status in the two languages, especially taking into account the double negation cases. Even though in both languages NegP dominates the finite node and acts as a barrier to V-fronting, in Bulgarian it enjoys a higher functional status, represented by two properties - a) Negation is the highest ranking host-candidate for maximal clitic clusters (under an assumption that a maximal cluster does have a host) and under certain circumstances (e.g. principle (C)), by default, it decides the placement of Arg-cl clusters, and b) Negation blocks V-fronting. In Serbo-Croat NegP closely dominates the Finiteness node and a) is dependent on the finite verb by seeking incorporation; b) never serves as clitic host and c) is a 'mild' barrier to V-fronting, since it allows further fronting of the incorporation Neg+V complex.

Both in Bulgarian and Serbo-Croat there are two types of negation: a) Lexical negation (also cf. Jespersen's (1924) *special negation*), instantiated by negative lexical items (i.e. lexical items which contain an explicit negative morpheme, e.g. 'nothing', 'nobody'), which is the one

typically applying to subjects or objects, and is a component in generalized negation constructions (cf. Laskova 1977). These are double negation constructions, in which syntactic negation is triggered by the presence of lexical negation ((63)d and (64)a,b).
b) Syntactic negation (*nexal negation* in Jespersen's (1924) terms), here referred to by Negation ('Neg'), which is more generally applicable. However, it is only in Bulgarian, in the cases of partial negation, that it can substitute for lexical negation ((64)c,d).

(64)a. Nikoj ne doide
nobody Neg came
b. *Nikoj doide
c. Ne vsički doidoxa
Neg everybody came 3 p.pl. (Bulgarian)
(Not everybody came)
d. *Ne sve je rekla
Neg all Aux-cl said (Serbo-Croat)

The observation that lexical negation on the subject triggers syntactic Negation in both languages can be partially explained by the fact that the subject has a wider logical scope than the predicate.

The ungrammaticality of (64)d suggests two specific features which distinguish Serbo-Croat from Bulgarian: a) syntactic negation can not function instead of (substitute for) lexical negation, and b) the relationship between lexical negation (negative lexical items) and syntactic negation is bi-directional, i.e. a negated subject will always presuppose a negative predicate and a negative predicate will be, in most cases (see below), ungrammatical without a negated subject.

We discuss a) and b) in turn now.

In Bulgarian there exists the grammatical alternation relation between constructions with a negated predicate ((65)a) and constructions with the negative head 'ne' (usually employed in syntactic negation) as an adversative element ((65)b).

(65)a. Ne sa go ubili te
Neg have him killed they
(It wasn't them who killed him)
b. Ne te sa go ubili
Neg they have him killed
('t wasn't them who killed him) (Bulgarian)
c. Nisu oni ubili
Neg+have they killed
(They didn't kill)
d. *Ne oni su ubili
Neg they have killed
e. Ubili su ne oni

killed have Neg they
(It wasn't them who killed) (Serbo-Croat)

However, Serbo-Croat disallows this alternation ((65)c,d). A plausible explanation could be the incompatibility between a negative subject and a positive declarative predicate. However, the grammaticality of the construction in (65)e, whose only difference from (65)d is the movement of the main verb 'kill' to FRONT, thus postposing (or extraposing) the negated subject 'not they', will point in the direction of 'properties of syntactic positions' (e.g. FRONT) and not constituents that might land there (e.g. subject NP). Thus, it appears that the plausible solution for Serbo-Croat could be a presupposition of the type (N):

(66) (N) A negative FRONT presupposes a negative predicate.

It might be the case that it is the predicate which moves in FRONT. Then, obviously the above presupposition dependency is avoided.

These data corroborate, independently of the arguments in favour of FRONT brought forward in connection with clitic placement in Serbo-Croat, the descriptional adequacy of a position like FRONT in South Slavic on the grounds of its special dominating effect on other syntactic categories.

In addition to the above discussion, it can be noted that despite the obvious differences in functional status across Slavic (e.g. Bulgarian vs Serbo-Croat vs Czech), in both Serbo-Croat and Czech Negation retains some functional load, which is demonstrated in its 'vehicle'-like function in V-fronting after incorporation.

(67)a. Nisam ubio ja
NegAux killed I (Serbo-Croat)
(I didn't kill (him))

b. Nebyl bych koupil
NegAux(pp) would bought
(I wouldn't have bought)

2. On Functional Categories (Projections)

The dependence of Negation on functional categories, such as Finiteness and Agreement (the type instantiated in past participles) in both Serbo-Croat and Czech, raises the issue of how these are to be adequately represented in syntactic structure, as well as what is to be the definition of 'Finiteness' and whether it can be broken down into components.

It is commonly assumed that what counts as a finite VP (following the Germanic tradition) should be marked for at least Tense and, optionally, Agreement. Traditional non-finite phrases, such as infinitives,

past participles (and gerunds) display neither tense nor agreement marking. However, the facts from Slavic argue in favour of a more flexible (gradient) treatment of functional categories than that of representing them as separate nodes in syntactic structure. If Finiteness is to be defined with respect to these languages, then the features it comprises should be [Tense, Agreement]. The order of features also represents their hierarchy and scope.

In some Slavic languages (e.g. Bulgarian and Macedonian) ModP dominates FIN, whereas in others (Serbo-Croat) they can occupy the same node. However, in both cases they appear as being in complementary distribution, i.e. the presence of Modality will preclude the necessity for marking Finiteness. In this case tense distinctions are lost (as well as rendered immaterial) and the predicate is only marked for Modality (an LF transcription will be 'placing the activity in a hypothetical reality'). Alongside the loss of Tense on the modal auxiliary, in the majority of Slavic languages, the tendency is to lose agreement marking, too. This applies to modal verbs like *'moze'* and the future auxiliary *'ste'* in Bulgarian ((68)a,b) and *'ké'* in Macedonian and conditional *'by'* in Serbo-Croat, Slovak ((69)a,b) and Macedonian.

(68) a. Az *može* da doida/Toj *može* da doide
I may comp come/He may comp come

b. Az *šte* rabotja/Toj *ste* raboti (Bulgarian)
I will work / He will work

(69) a. ona *bi* ćitala/ti *bi* citao/oni *bi* citali (Serbo-Croat)
she would read/you... /they...

b. Ja *by som* napisal list (Slovak)
I would have written letter

Even if a present tense auxiliary appears below ModP, the tense marking denotes some relative tense, not a real present time location of the activity. This is easily seen in Bulgarian future perfective constructions ((70)a) and Macedonian, in whose future-in-the-past/conditional periphrastic constructions V-main can occur even with a past tense marking ((70)).

(70)a. Do utre šte sŭm pročel knigata
til tomorrow will am read(pp) book-the
(By tomorrow I will have read the book)

b. ... v zemi ke propadneše ot stramovi
in ground will disappear(pt) from shame
(... would disappear into the earth with shame)

In the Bulgarian case ((70)a) an aspectual meaning of completion is rendered by the whole analytical construction Aux+past participle, i.e. the auxiliary *sum* itself does not denote tense proper. Likewise, in the Macedonian ((70)b) conditionality is rendered by the phrase *ke propadneše* as a whole, and not alone by either component.

Agreement, unlike Tense, can be marked on some non-finite VPs, such as the past participles *čitao, čitala, čitali, napisal*. Past participles in Slavic show agreement for Number and Gender. In the case of more than one past participle as in Bulgarian (4)a all past participles will show agreement. Since the agreement marked on past participles is more like the adjectival agreement, an issue to be considered is the plausibility of two types of agreement, 'main' (or proper, with the features [person, number]) and 'secondary' (with features [number, gender]). An alternative is to carry further the metaphor of a 'discontinous subject' (in Riemsdijk and Williams 1986), assuming one type of agreement comprising all three features [person, number, gender], which are 'dispersed' in different combinations throughout the predicate. The question is, then, how 'discontinuous' a subject can be?

What can be summarised so far is that:

a/ Finiteness and Modality exhibit relations of complementarity;

b/there is a hierarchy in scope and function among the features comprising Finiteness, i.e. Tense ranks higher than Agreement; and

c/Agreement is displayed in more than one node (and in some cases ((68)b) separated from Tense). This corroborates a view against treating Infl as a single node. Instead we suggest regarding tense and agreement marking as static well-formedness rules applying to VPs.

Further evidence is to be found in English where modal verbs cannot be said to bear any tense markers (<u>can</u> and <u>could</u> are just two different modal auxiliaries), let alone Agreement distinctions (Mood is then separated from and in complementary distribution with Tense). Also, as in the Bulgarian (68)a and the Slovak ((69)b), only some relative time reference is (can be) carried by the infinitive, i.e. 'simultaneity' or 'precedence' as in the corresponding English examples ((71)a,b).

(71) a. He could come
'The possibility obtains(now) that he may come now '

b. He could have come yesterday
'I (now) state the possibility of his coming *yesterday '*

The static well-formedness rules for Slavic can be spelled out as follows:

a/ Unless superceded by Modality,Tense goes on the leftmost verb.

This is achieved by either inflectional morphology or suppletive forms (e.g. the forms of auxiliary *'be'*).

(72) Az sŭm ja čel tazi kniga
I belp.sg Pres it read(pp) this book

b/ Agreement goes on all verbs (except for infinitives in Serbo-Croat, Czech and Slovak, which are non-inflectional forms).

(73) a. Az sŭm bil rabotil (Bulgarian)
I be lp.sg. be(pp)sg.M work(pp)sg.M
b. Ja by som bol napisal list (Slovak)
I would belp.sg. be(pp)sg.M write(pp)sg.M letter

3. The Uniqueness of Attraction

So far, all the functional categories discussed in part II. 2. - Finiteness, Modality, Agreement, as well as Negation, have appeared to have some control over other categories in syntactic structure. Their different scope and functional load is best displayed in their operating on different categories across Slavic. This can be phrased as the *Uniqueness of Attraction* principle, namely:

> *Each functional category can operate on and attract (i.e. be critical for the placement of) only one other category.*

Thus the relationship between two such categories can be described as unique.

This principle has proved to obtain all across Slavic. For instance in Bulgarian *Finiteness* has been shown to be critical to the placement of *Argument clitic clusters* in the sense that they right-adjoin to the finite auxiliary. *Finiteness* also turns out to play an important role in the constraints on long head movement.[9] Negation (due to its high position in the syntactic hierarchy) has been anlysed as operative in the case of maximal clitic clusters, as well as some default cases of Argument clitic placement. In Serbo-Croat *Finiteness* attracts *Negation* (and not, or, instead of, clitic clusters), which incorporates with the finite verb. Consequently in Serbo-Croat, Tense cannot be seen as critical to the placement of Arg-clitic clusters, which, in the presence of Negation, are no longer part of a larger clitic cluster Aux-cl+Arg-cl. However, it appears that, syntactically, Serbo-Croat does not distinguish between maximal and Arg-clitic clusters in terms of placement principles. This is demonstrated in constructions like (48)b,d in which the Arg-clitic cluster right-adjoins to FRONT, thus occurring in the syntactic position for maximal clusters (cf. principle (F) (I.3.3.2)). In Czech the closest tie is between *Agreement* and *Negation*, i.e. the first Agreement-bearing node below the finite auxiliary attracts Negation with the same incorporating effect ((57),(58)).

4. The Projection of Argument Structure

The placement of Arg-clitic clusters in all the languages discussed so far speaks in favour of postulating a principle of the projection of Argument structure maximally early in the linear structure.

In an earlier analysis of clitic doubling in Bulgarian (Dimitrova-Vulchanova and Hellan 1991), it was argued that all the constructions with clitic doubling in Bulgarian, as well as the contracted pronominal constituents of the type 'Ga'n'a'n ikke' ('gave he her it not') in Norwegian, suggest a principle of projecting the structure of aspectually completed (telic) predicates. It seems that the above principle applies to the rest of Slavic, too.

What the Bulgarian structure (74) displays is a perfectly balanced piece with Argument structure projected before the VP, whereas the argument NPs inside the VP occur in their base position after V-main.

(74) Ivan *mu ja* dade *knigata na Petŭr*
Ivan him(D) it(Acc) gave book-the to Peter

Traditional analysis (for an alternative view see Spencer 1991: 360 on Macedonian) treats pronominal clitics in Bulgarian as simple case-marker substitutes which re-enhance constituent order as a means of signalling Argument structure. It seems, however, that clitic doubling would occur only in the cases when the direct object is a definite NP (indirect objects are here treated as inherently definite) both in Bulgarian and Macedonian, which, in terms of the gestalt framework, advocated in Dimitrova-Vulchanova and Hellan, op. cit., is described as the sufficient requirement for yielding completed (telic) constructions. Then the argument clitic cluster *'mu ja'* can be analysed as a projection (before the VP) of the bare structure of this completed construction, which thus anticipates the lexical part of the VP, occurring after the verb. What would follow from this is that the issue of whether clitics have an argument status or not may seem irrelevant, since they can be described to operate on a level different from that of theta-roles and arguments. Pronominal clitics here exhibit a status of the same rank as functional categories (described in the gestalt framework as global features).

The suggestion that Argument clitics belong to a structural layer different from that of Argument structure finds indepndent evidence in long head movement phenomena in Bulgarian[10].

(75) Dal sŭm *mu ja* bil knigata na Ivan
given have him it had book-the to Ivan
(I have given the book to Ivan (according to somebody))

A problem arising in relation to constructions of the (75) type (cf. Lema and Rivero 1989, Rivero 1992b) is whether the main verb, once it has moved (e.g. dal in (75)) can properly govern its trace (in a generative framework theory of ECP), which, in turn, would ensure government for the verb-phrase internal NPs (i.e. the two objects). The solution in the above cited works is that government is achieved through an extended Tense-marking chain (the finite auxiliary providing a link in this chain). As plausible as it is, this explanation does not cover the clitic reduplication cases in which it is both the Argument clitic cluster and the Argument NPs which are left behind the main verb after it has moved from its base position. If an extended Tense-marking chain can provide for the full Argument exponents, it will be more problematic for the Argument clitics. Thus, if one assumes that these clitics have Argument status, then they ought to be assigned a proper governer. The problem is, then, whether it can still be the trace of the main verb, while the clitics occur higher in the syntactic structure? However, as suggested above, if Argument clitics are treated as belonging to a structural layer of projection, then they will not appear as competing with the full NPs for a governing verb.

Also the compulsory 'Wackernagel' position for clitics, especially Arg- clitics, in the other Slavic languages discussed in the present paper appears to be justified by exactly the same principle of projecting Argument structure as early as possible in sentences, usually preceding the VP. This, then, would explain why in the majority of Slavic languages clitic clusters seek right-adjunction to a site, high up in syntactic structure, which, apart from syntactic support, provides scope over the whole predicate and thus good opportunities for expressing structural features like e.g. aspectual telicity.

This projection principle can also be traced in the way multiple wh-extractions work in the above mentioned languages.

Formulating the principle of projecting Argument structure early in linear terms and separately from the lexical part of the construction is similar to a suggestion put forward by Anderson in a discussion of clitics (cf. Anderson 1992a: 217-223, 1992b) according to which clitic placement in second position in the 'Wackernagel' languages is dictated by the same structural principle which decides verb second placement in e.g. Germanic. In other words, the rule which says 'realize the inflectional features of a clause on a verb which immediately follows its initial element' can be united with the rule which decides the placement of the 'structural features' relevant to the clause domain (in the form of clitic exponents) in clause second position.

5. FRONT in Bulgarian and Wh-extractions

In a 1988 article on multiple wh-extractions, Rudin suggests analysing a sequence of fronted wh-words in Bulgarian as a constituent. This type of analysis could be justified on the basis of the contrast between what the author calls Multiply-filled SpecCP ([+ MFS]) languages (Bulgarian) and [- MFS] languages (Serbo-Croat, Czech), since in the latter the wh-sequence appears to be interrupted by clitic clusters claiming the second position ((76)a,b).

(76)a. *Koj na kogo kakvo* dade(e dal)?
who to whom what gave(has given) (Bulgarian)
b. *Ko je što kome* dao?
who has what whom given (Serbo-Croat)

However, under certain conditions, Bulgarian and Serbo-Croat can behave in the same way with respect to multiple wh-extraction from the same clause:

(77)a. *Koj kogo* vižda?
who whom sees (Bulgarian)
b. *Ko koga* vidi?
who whom sees (Serbo-Croat)

They diverge at the point when in Serbo-Croat either a/ Finiteness has a separate exponent (76)b or b/ an Arg-clitic is present ((78)a,b).

(78)a. *Koliko **im** ko* daje?
how many them who gives
b. *Ko **se** čega* boji?
who refl cl what fears
c. *Ko* želite da vam *šta* kupi?
who want(2pl) comp you(D) what buy
(Who do you want to buy you what)
d. *Ko koga* misliš da je video
who whom think comp is seen
(Who do you think has seen whom?)
e. *Ko **si** koga* mislio da je video
who are whom thought comp is seen
(Who did you think had seen whom?)
f. **Ko koga **si*** mislio da.....

The structure of multiple wh-constructions in Serbo-Croat ((78)) provides additional corroboration to principle (Y) in 3.3.2 ('FRONT must be filled and can only have one element', in this case - a wh-constituent) and the principle for clitic placement in Serbo-Croat, i.e. clitic clusters seek the

element in FRONT as a host.

The data from wh-extractions from subordinate clauses shows that in this case there are two options:
a) one of the wh-constituents moves to FRONT of the main clause, whereas the other remains in situ ((78)c); or, according to some speakers,
b) multiple extraction can occur ((78)d,e), following the constraints on main clauses ((78)f). Based on the constraints for wh-extractions from both main and subordinate clauses, a more detailed suggestion appears justifiable concerning Serbo-Croat syntactic structure, namely the existence of a secondary fronting site which immediately precedes the main verb and where certain 'mildly' fronted constituents (such as the rest of wh-constituents in multiple wh-constructions) occur. The plausibility of such a site for secondary fronting can be demonstrated on the material of the so called left-branch extraction constructions (cf. (45)a and (46)), in which the head noun of the NP out of which extraction occurs has moved to this site, whereas the rest moves further to FRONT. Presently, we leave the issue open. We only find it appropriate to mention that these data go counter to Rudin's prediction that in the [-MFS] languages (e.g. Serbo-Croat) the non-initial wh-constituents move to adjoin to IP. However, in view of the constructions discussed so far, the category appears to be rather V-main.

So far, the analysis of wh-extraction has appeared to be inseparable from rules of clitic placement in both Bulgarian and Serbo-Croat.

As was argued above, the placement in the 'Wackernagel' position for clitics in Serbo-Croat and Czech does in fact corroborate the validity of the principle of projecting argument structure separately from its lexical instantiation (as NPs). Then, in the case of wh-extractions, Arg-clitics should not be seen as interrupting the wh-sequence, but as actually belonging there, since both wh-constituents and Arg clitics enjoy the same structural status. Thus the function of wh-sequences could be described as projecting the structure of an interrogative construction.

In Rudin's anlysis the interrelation of clitics and wh-constituents has been given a slightly over-generalized treatment, namely that in Serbo-Croat all clitics 'take clause second position', whereas in Bulgarian they are 'proclitic to the verb'. In Bulgarian, however, there are at least two generally recognized types of clitics - Arg-clitics and Aux-clitics. The question then remains - will Aux-clitics be proclitic to the verb? And also if the generalization applies to just Arg-clitics, in what sense are they proclitic - syntactically or phonologically? And finally to which verb - V-main or V-aux? This type of analysis obviously goes against (at least) the facts about Bulgarian (cf. part I. 1.).

Another claim in the quoted article by Rudin appears to be that the order in the wh-cluster in Bulgarian is fixed ((79) from Rudin 1988),

(79) Koj kogo na kogo e pokazal?
who whom to whom has shown

with the remark that no other word order is possible. However, the order of DO and IO wh-constituents is not fixed and allows for alternations of the type in (80).

(80) a. *Koj kakvo na kogo* kaza?
who what to whom said
b. *Koj na kogo kakvo* kaza?
who to whom what said
c. *Na kogo koj kakvo* kaza?
to whom who what said

It appears that the only preferred position within the sequence is that of the subject wh-constituent - it usually initiates the wh-cluster. This corroborates suggesting the relevance of the FRONT position in Bulgarian as a nonspecified site which, depending on certain restrictions (cf. part I. 1.5 and 1.6), accepts subjects, fronted verbs and other fronted elements. In the case of interrogative constructions, the restrictions to V-fronting no longer apply and FRONT takes more than one element, the possible patterns being as discussed in 1.6, similar constructions exemplified in (81).

(81) a. *Ti kupil li* si ja knigata?
you bought Q cl Aux cl Arg cl book-the
(Did you buy this book?)
b. *Ivan na kogo kakvo* e dal?
Ivan to whom what has given

This, then, justifies treating interrogative structures in a unified manner, independently of whether they are of the yes/no type or the wh-type. In both cases the structure of FRONT is compatible with the generalizations in 1.6, and can be represented as consisting of two major constituents - initial for Subject and second for wh-constituents or fronted verbs (in view of the complementarity relations suggested for wh-constituents and complementizers, on the one hand and fronted verbs on the other). We also remark here that wh-constituents, irrespective of their number are allotted position 2 in FRONT. Also, treating Subject as a topicalized element (Rudin 1988) is hardly justifiable, since this appears to be its base position ((82)a,b, also part I. 1.2 and 1.6).

(82) a. *Kupil li si ja knigata *ti?*
bought Q cl Aux cl Arg cl book-the you
b. *Kupil li si ja *ti* knigata?
c. ?Kakvo na kogo *koj* e dal?/*Kakvo na kogo e dal *koj?*
what to whom who has given/what to whom has given who

d. *Kakvo na kogo e *koj* dal?
what to whom is who given

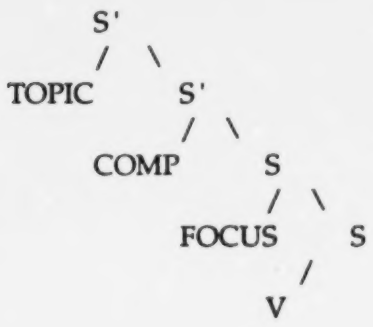
Regardless of the distinctions between Bulgarian and Serbo-Croat with respect to wh-fronting (Czech follows a pattern similar to the one in Serbo-Croat), namely the constraints on FRONT in Serbo-Croat, there is reason to believe that the placement of wh-constituents are language-specific manifestations of the same principle of projecting structural constituents as early as possible in sentence structure. The facts also suggest that the principle can be extended to cover the tendency for structural components to cluster together, i.e. part of the sentence (preferably the initial) will carry the structural information regarding Argument structure, Aspect and deviations from the base structure. This principle can be seen as adequately manifested in the rules governing the placement of Slavic clitic- and wh-clusters.

FOOTNOTES

1. Suggestions so far include analysing Bulgarian clause initial structure into TOPIC and FOCUS with and intervening COMP (complementizer) (Rudin 1986). The above are argued to be purely syntactic positions, however discourse-based. In the course of analysis a number of suprasegmental and semantic facts about the data appear to contradict the validity of such discourse-flavoured terms. One of the difficulties when operating with such terms is that there are no sufficiently reliable criteria to keep them apart and characterize them by defining which constituents use them as a landing site; moreover there results a contradiction in terms when, for instance, syntactically topicalized constituents move into 'syntactically'-defined FOCUS. However, it will not be the purpose of this paper to discuss the problems that arise if a language is defined as a 'Topic-Focus'-language.

2. Verb fronting is discussed in more detail in the section on Macedonian, where a distinction is made concerning long head movement.

3. Rudin's (Rudin 1986:20) suggestion for Bulgarian clause structure boils down to recognizing three basic components in clause-initial position represented as follows:



She also suggests (Rudin 1986:26) that the subject's underlying position is postverbal (as e.g. opposed to preverbal (in her terminology) or in other words CP-Spec). This is mainly done for the sake of an analysis of the 'principle of economy' type, i.e. if Subject is assumed to be base-generated in a preverbal position, which will coincide with Rudin's FOCUS, then each time a constituent is focused, the subject will have to move out.

4. Examples of the (13)d type without Arg-clitics are marginally acceptable, however dated, e.g. Śte li rabotis? (Will you work?), but in the presence of argument clitics they are ruled out.

5. Option b) could be seen as reflecting some principle of syntactic movement economy, whereas a) and c) seem to be dictated by a factor of host-candidate 'naturalness', i.e. the most natural category that appears to decide the placement of argument clitics is a verbal one (either [+V] or a functional category dominating V, i.e. Finiteness).

6. It should be noted that Macedonian exhibits a large dialectal variation, to be best represented in terms of 'isoglosses', there being a major distinction between the Western isogloss and the Northern/and Eastern isogloss, displayed in a number of features, both phonetic and grammatical (cf. Tomic 1989). Each isogloss consists of a number of dialects. The Macedonian dialects are also influenced by the respective standard national languages, e.g. Bulgarian and Serbo-Croat.

7. The Balkan Sprachbund traditionally comprises Greek, Bulgarian, Rumanian, Albanian (and possibly Macedonian). Synchronically, the most typical morpho-syntactic features, common to all languages in the 'bund' are: a postposed article morpheme/clitic (except for Greek), dative-possessive clitics, clitic doubling, anlytical degrees of comparison, an inflected infinitive introduced by a type of complementizer, only to

mention a few. There are also common lexical features (also cf. Bynon 1977, Assenova 1988).

8. In view of arguments to be brought forward in forthcoming work, the term 'placement' sometimes replaces 'adjunction', with the following difference: 'adjunction' is used in the technical sense pertaining to the relation between a clitic and its host, whereas 'placement' is employed in a much broader sense applying to the 'strategies' for clitic positioning with respect to the overall clause (phrase) structure (also cf Klavans 1985, Aikhenvald 1989).

9. When the Modal node is filled by the future auxiliary *šte*, which, it will be recalled (part I.1.3), is non-marked for Finiteness, no long head movement is available to V-main, e.g.

*Pročeta šte ja knigata
read will it(Acc cl) book-the

What the ungrammaticality of the above example suggests, is that, in long head movement there are two important requirements that should be met:

a) a non-finite V-main
to move across
b) a finite auxiliary head

This stipulation is corroborated by Bulgarian dialectal data form dialects with future auxiliary *ste* explicitly marked for finiteness and remnanats of the old infinitive non-finite form, e.g.

Izja štat ma tija vulci
eat(non-fin.) will(3pl) me these wolves
(These wolves will eat me)

It appears then that Finiteness may decide the availability of long head movement in the sense that the verbal head which is by-passed must be overtly marked for Finiteness.

10. Other Slavic languages are not considered due to the lack of clitic reduplication.

REFERENCES

Aikhenvald, Alexandra 1989. "On clitics as a syntactic class in the Berber languages." In *Problemy Semanticeskoi i Syntaksiceskoi Typologii*. Moskva, Nauka 1989.

Anderson, Stephen R. 1991. "Clitics are the Morphology of Phrases." Paper presented at the *First Plenary Conference of the ESF Programme in Language Typology, Il Ciocco, May 1991.*

Anderson, Stephen R. 1992a. *A-Morphous Morphology*. Cambridge Studies in Linguistics 62, Cambridge University Press 1992.

Anderson, Stephen R. 1992b. "Wackernagel's Revenge: Clitics, Morphology and the Syntax of Second Position." Lecture presented to the *Syntax Reading Group at Indiana University, November 1992*

Assenova, Petja 1989. *Balkansko ezikoznanie: Osnovni problemi na balkanskija ezikov sujuz*. Nauka i izkustvo, Sofia 1989

Bynon, Theodora 1977. *Historical Linguistics*. Cambridge University Press 1977.

Dimitrova-Vulchanova, Mila, and Lars Hellan 1991. "Clitics and the Completedness Parameter." In *Nordic Journal of Linguistics*, 14,1-39.

Ćavar, Damir and Chris Wilder 1992. "Long Head Movement? Verb-Movement and Cliticization in Croatian." *Sprachwissenschaft in Frankfurt, Arbeitspapier Nr. 7.*

Jespersen, Otto, 1924. *The Philosophy of Grammar*. Allen and Unwin.

Kayne, Richard 1991. "Romance Clitics, Verb Movement and PRO." In *Linguistic Inquiry*, vol. 22, no 4, 647-686.

Klavans, Judith L. 1985. "The Independence of syntax and phonology in cliticization." In *Language*, vol. 61, no 1, 95-121.

Laskova, Lili 1977. "Upotreba na vidovete sintacticno otricanie v surboxurvatski i bulgarski ezik." In *Zakonomernosti na razvitieto na slavjanskite ezici* Sofia 1977, 83-121.

Lema, José and Maria-Luisa Rivero 1989. "Long Head Movement: ECP vs. HMC." In *Proceedings of NELS 20*, 1989, 333-347

Progovac, Ljiljana 1991. "Polarity in Serbo-Croatian: Anaphoric NPIs and Pronominal PPIs." Squib in *Linguistic Inquiry* , vol. 22, no 3, 567-572.

Riemsdijk, Henk van and Edwin Williams 1986. *Introduction to the Theory of Grammar*. The MIT Press, Cambridge, Massachusetts, London, England 1986.

Rivero, Maria-Luisa 1990. "Patterns of V-raising in Long Head Movement, and Negation: Serbo-Croatian vs Slovak." In *ASJU (International Journal of Basque Linguistics and Philology)*, special issue 1990.

Rivero, Maria-Luisa 1991. "The Long Head Movement Languages of Europe: a preliminary overview." Paper presented at the *First Plenary Conference of the ESF Programme in Language Typology, Il Ciocco, May 1991.*

Rivero, Maria-Luisa 1991. "Long Head Movement and Negation: Serbo-Croatian vs. Slovak and Czech." *The Linguistic Review* 8 (1991) 319-351.

Rivero, Maria-Luisa 1992a. "Bulgarian and Serbo-Croat Yes-No Questions: V- Raising to -li vs. Li-Hopping." Squib. To appear in LI.

Rivero, Maria-Luisa 1992b. "The structure of the clause and V-movement in the languages of the Balkans." To appear in NLLT.

Rouveret, Alain 1992. "Clitics, Morphological Checking and the Wackernagel Position in European Portuguese." Paris-8 ms.

Rudin, Catherine 1986. *Aspects of Bulgarian Syntax: Complementizers and WH Constructions.* Slavica Publishers, Inc. 1986

Rudin, Catherine 1988. On Multiple Questions and Multiple WH Fronting. In *Natural Language and Linguistic Theory,* Volume 6, No. 4, 445-503.

Spencer, Andrew 1991. *Morphological Theory.* Basil Blackwell 1991.

Toman, Indrich 1980. "Weak and Strong: Notes on *be* in Czech." In *Wege zur Universalien Forschung , Sprachwissenschaftliche Beitrage zum 60. Geburtstag von Hansjakob Seiler,* ed. Gunter Brettschneider and Christian Lehmann. Gunter Narr Verlag Tubingen 1980.

Tomic, Olga Miseska 1989. "On the assessment of the markedness status of the exponents of a grammatical category." In *Trends in Linguistics, Studies and Monographs 39, Markedness in Synchrony and Diachrony,* ed. Olga Miseska Tomic. Mouton de Gruyter, Berlin . New York 1989.

Zwicky, Arnold 1977. "On clitics." Bloomington: Indiana University Linguistics Club.

A PROMOTION ANALYSIS OF RESTRICTIVE RELATIVE CLAUSES

Tor A. Åfarli,
Dept. of Scandinavian Languages and Literature,
University of Trondheim,
N-7055 Dragvoll,
Norway.
e-mail: tor.aafarli@avh.unit.no

1. Introduction

I must begin by introducing some terminology. For the purpose of this article, strings like those exemplified in (1) are called relative clause complexes:

(1) a. the shoes that he bought
b. the shoes which he bought

Typically, a relative clause complex consists of what I will call a relative clause associate, a relative clause particle, and a relative clause base. In (1), *the shoes* is the associate, *that* in (1a) and *which* in (1b) are particles, and *he bought* is the base. Following more common usage, the position inside the base which the associate is semantically related to, is called the relativized position.

Within generative grammar, a standard type analysis of restrictive relative clause complexes (see e.g. Chomsky 1973, 1977) involves construing the associate as generated in a matrix clause, with the relative clause (particle plus base) related to the associate by an interpretive rule (possibly mediated by a rule of predication as in Chomsky 1982: 92-3 or Chomsky 1986a:85). However, there is a non-standard type analysis, which has been proposed by Schachter (1973) and Vergnaud (1974), among a very few others. That is the so-called promotion (or head raising) analysis, whereby the associate (or the head of the associate) is promoted or moved from inside the relative clause base into the matrix clause.

In this article, I shall argue that a variant of the non-standard promotion analysis is appropriate for the most common type of restrictive relative clauses in Norwegian, namely the type that I shall call *som*-relatives, i.e. relatives like the one exemplified in (2), which has (or may have) the complementizer *som* as its relative clause particle.

(2) skoene som han kjøpte
'the shoes that he bought'

Thus, in such cases I shall argue that the associate is promoted from inside the base. However, I shall also present evidence that there are types of restrictive relative clauses in Norwegian where a relative clause associate is actually generated in the matrix clause, and where the relative clause is related to that associate along lines advocated by a standard type analysis.

The article is organised as follows. Section 2 presents what I call the argument from design, which suggests that the promotion analysis is the minimal analysis, given well-motivated assumptions about general clause structure in Norwegian. Section 3 presents various empirical facts, notably facts involving idioms and binding of pronouns and anaphors, which strongly suggest that a promotion analysis of *som*-relatives must be assumed. Section 4 discusses some problems encountered by the promotion analysis as it is spelled out in this article, as well as some desirable predictions made by it.

2. The Argument from Design

I will start by showing that considerations relating to harmony or economy of analysis seem to suggest a promotion analysis of *som*-relatives. I call this argument the argument from design.

It is a well-known fact that individual syntactic forms often are multifunctional. For instance, (3) may be used as an argument of a verb or as an exclamation. Similarly, (4) may be used as a question or as a counterfactual.

(3) at du vil kjøpe nye sko
that you want-to buy new shoes

(4) vil du kjøpe nye sko
want-to you buy new shoes

This phenomenon is quite interesting because we could as well imagine (e.g. if syntax were derived directly from semantics) that each function had its own unique expression. The fact that this is not so suggests that the grammar makes available only a fairly limited set of possible forms, with the consequence that each function cannot have a unique expression. According to common sense, this should in turn mean that we must expect that each available form is actually exploited.

Considering V2 in Germanic languages, it is clear that the grammar must provide a syntactic frame or template which can serve as a basis for the explanation of this phenomenon. The standard analysis of V2 involves verb movement to the head position of the leftmost projection in the representation of the clause, with any constituent occurring to the left of the moved verb being analysed as moved to the specifier position of that projection. Thus, a frame gives rise to a limited number of syntactic forms. For concreteness, I will assume that the projection mentioned here is a T-projection. As far as

Norwegian is concerned, I will furthermore assume that the frame shown in (5) constrains the possible forms that finite clauses may show (see Åfarli 1991, 1992 for motivation), although the assumption of this particular structure is not crucial for the argument to be presented below.

(5) [TP .. [T' [T ..] [VP NP V....]]]

For instance, (3) above is derived by inserting a complementizer in the T-position, whereas (4) is derived by moving the verb to that position. Similarly, declarative clauses are derived on the basis of a structure like (4) by moving some constituent to the specifier position of the TP, etc.

Consider main clause wh-interrogatives and main clause declaratives as exemplified in (6) and (8) in the light of (5). The respective structural analyses are shown in (7) and (9). These two clause types show a neat formal symmetry.

(6) a. Kven kjøpte slike sko?
'Who bought such shoes?'
b. Kva sko kjøpte han?
'What shoes did he buy?'

(7) a. [TP kven $_i$ [T' [T kjøpte $_j$] [VP t $_i$ t $_j$ slike sko]]]
b. [TP kva sko $_i$ [T' [T kjøpte $_j$] [VP han t $_j$ t $_i$]]]

(8) a. Han kjøpte slike sko.
'He bought such shoes.'
b. Slike sko kjøpte han.
'Such shoes did he buy.'

(9) a. [TP han $_i$ [T' [T kjøpte $_j$] [VP t $_i$ t $_j$ slike sko]]]
b. [TP slike sko $_i$ [T' [T kjøpte $_j$] [VP han t $_j$ t $_i$]]]

Both types are derived by moving the verb to T and some other constituent to the specifier position of the TP. The only difference between the two types is the form of the NP filling the specifier of TP position; in one case it is a wh-NP, in the other a non-wh-NP.

Furthermore, a comparison of the patterns exhibited by the main clause wh-interrogatives in (6) and (7) and embedded wh-interrogatives, shown in (10) and (11) below, reveals another neat regularity:

(10) a. ...kven som kjøpte slike sko
'...who bought such shoes.'
b. ...kva sko (som) han kjøpte
'...what shoes he bought.'

(11) a. [TP kven $_i$ [T' [T som] [VP t $_i$ kjøpte slike sko]]]
b. [TP kva sko $_i$ [T' [T som] [VP han kjøpte t $_i$]]]

In this case, the minimal difference is presence vs. absence of verb movement to the T-position. Instead of verb movement, the embedded clauses have complementizer insertion into the T-position.[1]

What would be the corresponding counterparts to (8) and (9)? Of course, it would be (12) and (13).

(12) a. ...han som kjøpte slike sko.
'...he that bought such shoes.'
b. ...slike sko (som) han kjøpte.
'...such shoes that he bought.'

(13) a. [TP han $_i$ [T' [T som] [VP t $_i$ kjøpte slike sko]]]
b. [TP slike sko $_i$ [T' [T som] [VP han kjøpte t $_i$]]]

These forms are derived in exactly the same way as the corresponding forms in (10) and (11) are.[2]

From a purely formal perspective, it would be quite surprising if language did not exploit these forms, interpreting them as relative clause complexes. In fact, given (5) (or some comparable frame), the assumption that (13) (or its equivalent given a comparable frame) shows the structure of *som*-relatives is the minimal assumption. If this minimal assumption is correct, two important things follow. First, that the appropriate analysis for *som*-relatives is a promotion analysis; second, that the whole relative clause complex is a TP. The latter is contrary to the analyses in Schachter (1973) or Vergnaud (1974), where the relative clause associate (or its head) is promoted from the relative clause into a pre-created slot in the matrix clause.

In what follows, I take this argument from design to suggest that (13) indeed is the appropriate analysis of *som*-relatives. In the next section, I will show that empirical considerations also support such a promotion analysis.

3. Empirical Motivation

The essential difference between a promotion analysis and a standard type analysis concerns the behaviour and position of the relative clause associate. In the variant of the promotion analysis pursued here the associate itself is moved

---

[1] I will assume that the complementizer is inserted into the T-position at an underlying level of representation in both (10a) and (10b). At surface structure the complementizer is obligatory in clauses like (10a). However, most speakers of Norwegian prefer deletion of the complementizer in clauses like (10b), especially if the wh-phrase is non-complex (but notice that the complementizer is optional in clauses corresponding to (10b) in Swedish). I take this variation to be irrelevant for the underlying structural parallelism between the two structures. For analyses of *som* taking note of the variation, and which is in many respects different from the analysis assumed here, see Taraldsen (1977) and in particular Taraldsen (1986a).

[2] But unlike what is the case for (10b), the complementizer is fully optional in (12b) at surface structure, again a fact that is irrelevant for the underlying structural parallelism.

to a position inside the relative clause TP, as shown in (14). But in a standard type analysis the associate is generated as part of the matrix clause and there is typically assumed to be movement inside the relative clause, as indicated in (15). For instance, in the standard type analysis of the corresponding English *that*-relative, a is a moved wh-element that is obligatorily deleted (see Chomsky 1973, 1977; Taraldsen 1977 proposes a similar analysis for Norwegian *som*-relatives). Chomsky (1986a:85) also suggests as a possibility that a is an abstract operator that is base-generated in the position of its trace.

(14) .....[TP NP i [T' [T som] [VP .....t i .....]]]
(15) ..... NP [TP a i [T' [T som] [VP .....t i .....]]]

The promotion analysis in (14) calls for an explanation of why the associate is naturally interpreted as a constituent of the matrix clause, which is unproblematic for the standard analysis in (15). This problem will be discussed in section 4. On the other hand, the standard analysis in (15) calls for an explanation of facts pertaining to the relation between the associate and the relative clause base. I shall now argue that considerations of the latter kind favour the promotion analysis over the standard analysis.

3.1 Idioms. One type of evidence concerns idioms. Schachter (1973: 31 f.) considers the following data (referring to work by Michael Brame):

(16) a. We made headway.
b. *(The) headway was satisfactory.
c. The headway that we made was satisfactory.

He observes that *headway* is normally restricted to occurrence as the object of *make*. Hence, the contrast between (16a) and (16b). However, as seen in (16c), when *(the) headway* occurs in a sentence that includes a relative clause, it is not restricted to occurrence as the object of *make*, provided it is the associate of a relative clause whose verb is *make* and whose object has been relativized. Now, if *(the) headway* is generated as a constituent of the matrix clause in (16c), as it would have to be on a standard type analysis, it appears to be difficult to exclude (16b). However, assuming a promotion analysis, (16c) is directly predicted because, on such an analysis, *(the) headway* would actually be generated as the object of *make* at an underlying level of representation. Yet, (16b) would still be excluded, because there *(the) headway* is not generated as the object of *make*.

A similar argument can be made using Norwegian data. For instance, consider the idiom *ta seg vatn over hovudet*, which means something like "take on too difficult or big commitments":

(17) a. Han tok seg vatn over hovudet.
he took *self* water over head-the
b. #Vatn utviklar seg lett til alvorlege problem.
water develops *self* easily into serious problems
c. Vatn som ein tek seg over hovudet, utviklar seg lett til alvorlege problem.
water that one takes *self* over head-the, develops *self* easily into serious problems

As shown in (17b), *vatn* cannot have the idiomatic interpretation (indicated by "#") when isolated from the rest of the idiom. Yet, it appears that it can in (17c). Again, the facts present a serious problem for a standard type analysis, but they are directly predicted on a promotion analysis.

Vergnaud (1974: 56 ff.) presents French data to the same effect. Consider the French idiom *prendre part á. Part* (in the relevant meaning) can only occur as the object of the verb *prendre*. However, as (18) shows, *part* can occur as the associate of a relative clause where *prendre* occurs inside that relative clause, even though *prendre* does not occur in the matrix clause:

(18) Il est surpris de la part que Jean a pris aux débats.
'He is surprised by the part that Jean takes in debates.'

As before, this fact is immediately predicted by a promotion analysis, but it remains a mystery on a standard type analysis.

3.2 Anaphors and Pronouns.[3] Next, consider connectivity effects involving so-called external anaphors (cf. Hellan 1988: 262). In each of the following two examples (the first one is borrowed from Hellan), the possessive anaphor *sine*, which occurs inside the relative clause associate, has the subject of the relative clause as antecedent:

(19) Det skjoldet fra sine forfedre som greven hadde skjenket,
ble utstillingens klenodium.
'The shield from his forefathers that the count had donated,
became the jewel of the exhibition.'

(20) Det av husa sine som Jon bor i, er ganske falleferdig.
That of his houses that Jon lives in, is quite miserable.'

---

[3] Grammaticality judgements involving anaphors and pronouns are often a bit messy. For that reason the presence/absence of stars must not be interpreted too absolutely in the remaining examples of this section. For the pairs given, the presence versus absence of a star indicates a contrast rather than an absolute judgement. The overwhelming majority of my informants found the contrasts that are indicated, although the contrasts were not equally strong for each informant.

In a standard type analysis, the anaphor in (19) and (20) would be an external anaphor because it occurs inside a constituent that is placed outside the movement domain of a constituent originating in the object position of the main verb of the relative clause. Such cases would therefore call for exceptional measures in a standard type analysis. On the other hand, the situation in (19) and (20) is immediately predicted by the promotion analysis, because, on that analysis, the relative clause associate originates in the object position of the relative clause main verb, i.e. in the scope of the antecedent, so that the anaphor would not be an external anaphor at all.

A similar argument for the promotion analysis can be obtained by considering the behaviour of pronouns with regard to co-reference possibilities. As (21a) suggests, a pronoun in an embedded clause may be co-referent with a name in a matrix clause. (21b) shows that the converse does not easily hold.

(21) a. Marit skreiv brevet til Jon $_i$ så han $_i$ ikkje skulle reise.
'Marit wrote the letter to Jon so that he should not go.'
b. *Marit skreiv brevet til han $_i$ så Jon $_i$ ikkje skulle reise.
'Marit wrote the letter to him so that Jon should not go.'

However, precisely the converse seems to hold if the embedded clause involved is a relative clauses:

(22) a. *Det brevet til Jon $_i$ som han $_i$ trudde at Marit hadde røpa noko hemmeleg i, kom bort.
'That letter to Jon that he believed that Marit had revealed a secret in, got lost.'
b. Det brevet til han $_i$ som Jon $_i$ trudde at Marit hadde røpa noko hemmeleg i, kom bort.
'That letter to him that Jon believed that Marit had revealed a secret in, got lost.'

On a standard type analysis, *(det) brevet til han* is a constituent generated in the matrix clause in both (21b) and (22b). It is therefore incorrectly predicted that (22b) would have the same judgement as (21b). However, on the promotion analysis it is predicted that structures involving *som*-relatives show the judgements in (22), because then the associate must be analysed as promoted from inside the relative clause base. Thus, the contrast in (22) is explained in the same way as the contrast in (23) is:

(23) a. *Brevet til Jon $_i$ trudde han $_i$ at Marit hadde røpa noko hemmeleg i.
'The letter to Jon he believed that Marit had revealed a secret in.'
b. Brevet til han $_i$ trudde Jon $_i$ at Marit hadde røpa noko hemmeleg i.
'The letter to him Jon believed that Marit had revealed a secret in.'

That is, the judgements are explained assuming the standard binding theory conditions.[4]

3.3 Som-*Relatives and* Der-*Relatives.* The promotion analysis is further corroborated by a comparison of *som*-relatives with what seems to be another type of relative. Consider the data in (24):

(24) a. Det huset der Jon bor, er ganske falleferdig.
'That house where Jon lives, is quite miserable.'
b. *Jon bor det huset.
'Jon lives that house.'
c. Det huset der som Jon bor, er ganske falleferdig.
'That house where Jon lives, is quite miserable.'

The relative clause complex in (24a) seems to consist of the associate *det huset*, an adverbial relative clause particle *der*, and the base *Jon bor*. However, a promotion analysis meets problems in this case. For instance, the ungrammaticality of (24b) suggests that *det huset* is not generated in the relative clause base. Moreover, (24c) shows that *der* and *som* may co-occur as relative clause particles in this type of relative. I take this to suggest that *der* is the element that is promoted from the base into the specifier of TP position. This is confirmed by the fact that *der* may occur without an associate like *det huset*, as shown in (25):

(25) Ulykka skjedde der (som) Jon bor.
The accident happened where Jon lives.'

Considering (24a) and (24c), this means that *det huset* is not promoted from the relative clause base, which in turn means that *det huset* is generated as a constituent of the matrix clause, along lines advocated by a standard type analysis. I will call *det huset* in (24a) and (24c) the secondary associate, and I will call *der* the primary associate. In (25) there is of course no secondary associate.

I assume that the relative clause complexes shown in (24a), (24c), and (25) are instances of the structure shown in (26):

(26) ... (det huset) [$_{TP}$ der $_i$ [$_{T'}$ [$_T$ (som)] [$_{VP}$ Jon bor t $_i$]]]

---

[4] Although both (22a) and (23a) are ungrammatical, most speakers find (23a) worse than (22a). This is possibly explained by the fact that the associate in (22a) is semantically related to a matrix clause, which the topicalized constituent in (23a) is not. Thus, there is a semantic basis for analysing the associate as part of the matrix clause in (22a), even though it is not part of the matrix clause syntactically. In this perspective, (22a) would be well-formed if the binding principles were applied in the semantic domain. I propose that it is this marked possibility for a semantic analysis that interfere to produce less clear judgements in cases like (22a) than in cases like (23a).

This means that relatives like the one in (24a) are *som*-relatives in disguise. What is exceptional about them, is that they may be related to a secondary associate which is a constituent of the matrix clause.[5]

Now, the fact that there exist two types of relative clause associate presents an interesting test case for the promotion analysis. If the relative clause associate contains an anaphor, we would expect a difference as to binding possibilities depending on whether the associate is a primary associate or a secondary associate. This expectation seems to be born out. Consider the contrast in (27); the relevant parts of the structures are shown in (28). Note crucially that there is no contrast if the anaphor is absent, cf. (29).

(27) a. Det av husa sine som Jon bor i, er ganske falleferdig.
'That of his houses that Jon lives in, is quite miserable.'
b. *Det av husa sine der Jon bor, er ganske falleferdig.
'That of his houses where Jon lives, is quite miserable.'

(28) a. [TP [det av husa sine$_j$]$_i$ [T' [T som] [VP Jon $_j$ bor i t$_i$]]] ...
b. [det av husa sine$_j$] [TP der $_i$ [T' [T som] [VP Jon $_j$ bor t$_i$]]] ...

(29) a. Det av husa som Jon bor i, er ganske falleferdig.
'That of the houses that Jon lives in, is quite miserable.'
b. Det av husa der Jon bor, er ganske falleferdig.
'That of the houses where Jon lives, is quite miserable.'

The contrast found in (27) is unexpected on a standard type analysis, where *det av husa sine* would be outside the relative clause TP in both (27a) and (27b). However, on the promotion analysis it is correctly predicted that an anaphor inside a primary associate may have its antecedent inside the relative clause base, whereas an anaphor inside a secondary associate may not.[6]

Further evidence is supplied by the contrast shown in (30) (where (30a) is the same as (22b)):

---

[5] In cases where a secondary associate is involved, I assume that it and the relative clause TP are related by a rule of predication, along the lines sketched in Chomsky (1982: 92-3). Note by the way that *der* may be substituted by *hvor* 'where' in the *bokmål* variety of Norwegian. However, *hvor* does not co-occur with *som*. I leave *hvor* out of consideration here.

[6] Also, my Swedish informants found a quite clear contrast in pairs comparable to (27) (and like Norwegian, Swedish shows no contrast if the anaphor is absent):

(iii) Det av sina slott som kungen bor i, ...
'That of his castles that the king lives in, ...'

(iv) *Det av sina slott där kungen bor, ...
'That of his castles where the king lives, ...'

In fact, the Swedish informants seemed to find the contrast even clearer than the Norwegian informants did. Those speakers (of Norwegian) that do not find structures like (27b) clearly ungrammatical presumably allow for real external anaphors as a marked possibility.

(30) a. Det brevet til han $_i$ som Jon $_i$ trudde at Marit hadde røpa noko hemmeleg i, kom bort.
'That letter to him that Jon believed that Marit had revealed a secret in, got lost.'
b. *Det brevet til han $_i$ der Jon $_i$ trudde at Marit hadde røpa noko hemmeleg, kom bort.
'That letter to him where Jon believed that Marit had revealed a secret, got lost.'

On a standard type analysis no contrast is expected, whereas the contrast is correctly predicted on the promotion analysis, given that the associate containing the pronoun is a primary head in (30a), but a secondary head in (30b), as I have argued. Essentially, (30a) is grammatical for the same reason as (23b) is, and (30b) is ungrammatical for the same reason as (21b) is.

It is also correctly predicted that switching the linear order of the name and the pronoun yields opposite judgements compared to (30) ((31a) is the same as (22a)):

(31) a. *Det brevet til Jon $_i$ som han $_i$ trudde at Marit hadde røpa noko hemmeleg i, kom bort.
'That letter to Jon that he believed that Marit had revealed a secret in, got lost.'
b. Det brevet til Jon $_i$ der han $_i$ trudde at Marit hadde røpa noko hemmeleg, kom bort.
'That letter to Jon where he believed that Marit had revealed a secret, got lost.'

On the promotion analysis, (31a) is ungrammatical for the same reason as (23a) is, and (31b) is grammatical for the same reason as (21a) is.

Note also that the *bokmål* variety of Norwegian has a (stylistically marked) relative clause construction involving an associate and a relative pronoun. The relative pronoun is either a possessive wh-pronoun modifying a nominal element as in (32a), or an ordinary wh-pronoun with a preposition obligatorily pied-piped as in (32b).

(32) a. Brevet hvis innhold Jon ville vite, ...
'The letter whose contents Jon wanted to know...'
b. Brevet om hvilket Jon snakket, ...
'The letter about which Jon talked...'

It should be a quite uncontroversial assumption that *brevet* in (32) is a secondary associate, whereas the wh-phrases *hvis innhold* and *om hvilket* are primary associates promoted from the relative clause base. On that assumption it

is correctly predicted that (33a) is ungrammatical, and that (33b) is grammatical:

(33) a. *Brevet hvis beskrivelse av Jon$_i$ han$_i$ ville vite om noen kjente til, ...
'The letter whose description of Jon he wanted to know whether anybody knew...'
b. Brevet til Jon$_i$ hvis innhold han$_i$ ville vite om noen kjente til, ...
'The letter to Jon whose contents he wanted to know whether anybody knew...'

The former is ungrammatical for the same reason as (31a) is, whereas the latter is grammatical for the same reason as (31b) is. In each case the explanation relies on the distinction between a non-promoted secondary associate and a promoted primary associate.[7]

---

[7] English has two common types of restrictive relative clause which I will refer to as the *wh*-type and the *that*-type, cf. (i) and (ii):
(i) the man who(m) Mary loved
(ii) the man that Mary loved
Several facts seem to support the conclusion that the *wh*-type involves movement of the *wh*-element from the relativized position, whereas the *that* of the *that*-type is a complementizer, see Chomsky (1973), (1977). In current terms, the former type presumably has *the man* as a secondary associate and the *wh*-element as the primary associate, analogous to Norwegian *der*-relatives, whereas the latter type are like the Norwegian *som*-relatives, i.e. the associate *the man* is promoted from the relative clause base. This gives rise to a test case similar to the one reviewed for Norwegian, and it appears that at least some speakers of English have the expected intuitions. Thus, these speakers find it easier to get co-reference between *him* and *John* in (iii) than in (iv):
(iii) The present for him that John believed that Mary had bought
(iv) The present for him which John believed that Mary had bought
Similarly, *himself* can be co-referent with either *Bill* or *John* in (v), but *Bill* is the preferred antecedent in (vi):
(v) Bill talked about the present for himself that John had bought
(vi) Bill talked about the present for himself which John had bought
Also, a promotion analysis of English *that*-relatives seems to be supported by weak crossover facts. Chomsky (1982: note 11, pp. 92-3) observes that weak crossover is suppressed in relative clauses, so that (vii) is possible with *the man* and *his* being co-referent, whereas the corresponding possibility is not available with *who* and *his* in (viii):
(vii) the man who his mother loved best
(viii) who did his mother love best?
This is explained by Chomsky on the assumption that *the man* and the relative clause are related by a rule of predication, in the following way. At LF, *the man* and *who* have different indexes. However, a pronoun like *his* may be co-indexed with *the man* at LF. Thus, LF shows the following structure:
(ix) the man$_i$ who$_j$ his$_i$ mother loved t$_j$ best
Therefore, there is no weak crossover violation at LF in this case. Subsequently, the rule of predication identifies the two indexes at LF, yielding the correct interpretation. On the other hand, the rule of predication is not possibly involved in (viii), so at LF there is a weak crossover violation in that case. Now, if the promotion analysis is true, *that*-relatives should be like (viii), showing weak crossover violations. The reason is that *the man* is not subject to a rule of predication on the promotion analysis. Rather, *the man* is raised just like *who* is in (viii). Again, at least

To sum up, a standard type analysis predicts no difference between *som*-relatives and *der*-relatives as to the binding and co-reference possibilities of anaphors and pronouns. However, the empirical material reviewed above shows that there are differences between the two types of relative clause in this respect. In fact, the identified contrasts, however weak they might be, consistently are as predicted by a promotion analysis. I conclude that this fact constitutes strong evidence in favour of a promotion analysis for the relevant cases, and simultaneously it must be seen as evidence against a standard type analysis.[8, 9]

4. Access to the Primary Associate

As shown in section 2 the assumption of the promotion analysis leads to the postulation of parallel structures for embedded questions and relative clause complexes, both types of structure now belonging to the category TP. This presents certain problems because it suggests that the two types of structure show parallel behaviour to a larger extent than they in fact do. The main aim of this

---

some speakers of English have the expected intuitions. For these speakers, co-reference between *the man* and *his* is more readily available in (vii) above than in (x):

(x) the man that his mother loved best

To sum up, although judgements vary a lot and are generally quite unclear there is some support for the conclusion that English *that*-relatives involve only a primary associate which is promoted from the base, whereas English *wh*-relatives involve a secondary associate generated in the matrix clause, with the *wh*-element promoted from the base (i.e. with the *wh*-element as primary associate).

[8] Notice that the relative clause complex occurs as the subject of the matrix clause in most of the examples relevant for binding of anaphors and pronouns displayed in this section. Other interesting binding facts come off if the relative clause complex occurs in some other function, say as direct object. However, these facts are not discussed here, primarily for lack of space. I hope to be able to have a close look at them at some future occasion.

[9] At first sight case attraction facts also seem to support a promotion analysis. Consider (i) and (ii):

(i) Vi snakket med henne/*hun.
'We talked with her/*she.'

(ii) Vi snakket med henne/hun som t hadde truffet oss dagen før.
'We talked with her/she that t had met us the day before.'

Given a promotion analysis, a putative explanation for the possibility of a nominative pronoun associate in (ii) could be that the pronoun gets nominative case from its trace in the subject position of the relative clause. However, such an analysis is compromised by facts like those in (iii) and (iv), where most speakers can use either the accusative or nominative form of the pronoun, as in (ii):

(iii) Vi snakket med henne/hun som vi hadde truffet dagen før.
'We talked with her/she that we had met t the day before.'

(iv) Vi snakket med henne/hun i den vakre kjolen.
'We talked with her/she in the beatiful dress.'

But in these instances there is no source for the nominative case of the pronoun, and it is a mystery that a nominative pronoun is possible at all. In fact, it seems that a nominative pronoun becomes possible as soon as the head pronoun is modified, in which case the explanation in terms of the promotion analysis suggested for (ii) becomes obsolete.

section is to propose an explanation of the most salient difference between embedded questions and relative clause complexes, namely the fact that relative clause complexes show what has been called a "matching effect", whereas embedded questions do not. The proposed explanation leads directly to an analysis of free relatives.

4.1 The Matching Effect. Consider the relation between a matrix verb and a relative clause TP on the one hand, and a matrix verb and an embedded question TP on the other. In the former case, it seems to be the relative clause associate that is the target for matrix requirements, whereas in the case of embedded question TPs no comparable status seems to be accorded to the initial wh-phrase. (34) and (35) show relevant data:

(34) a. Han kjøpte eplet som var størst.
'He bought the apple that was biggest.'
b. Han kjøpte eplet.
'He bought the apple.'

(35) a. Han spurde henne kva eple som var størst.
'He asked her what apple was biggest.'
b. *Han spurde henne kva eple/eplet/eplet som var størst.
'He asked her what apple/the apple/the apple that was biggest.'

In both (34a) and (34b), the matrix verb seems to select the NP *eplet*, whereas the matrix verb in (35a) seems to select the propositional TP, cf. the ungrammaticality of (35b). Generally, restrictive relative clause complexes are embedded under verbs that select NP, not under verbs that select propositions. This situation has been described by saying that relative clauses show a "matching effect". On a standard type analysis, the matching effect poses no problem, for obvious reasons. In fact, the matching effect is the main motivation for a standard type analysis. However, the matching effect seems incompatible with the present variant of the promotion analysis, because the complement of a verb like *kjøpe* in (34a) is analysed as TP, not as NP as seems to be required given the matching effect. How can the promotion analysis and the matching effect be reconciled?

Observe first that the problem identified above is not a problem restricted to the promotion analysis. It is a problem in any language that has relative clauses where the associate occurs inside the relative clause. For instance, there are many languages where the associate occupies its base-generated position inside the relative clause, as the following example from Bambara (a Niger-Congo language) shows, cf. Bird (1968) (see also Schachter 1973: 35).

(36) a. N ye so ye
I PAST house-the see
'I saw the house'

b. TyE be [n ye so mìn ye] dyO
man-the PRES I PAST house see
build
'The man is building the house that I saw'

In (36b), the relative clause is indicated by brackets. It is identical to the corresponding main clause in (36a), except for the relative clause marker *mìn* (which is the determiner of *so*, i.e. *so mìn* is the relative clause associate). In particular, the associate in (36b) occupies the same position (the object position inside the relative clause) as the corresponding constituent in (36a) do. Thus, such structures present problems comparable to those presented by the promotion analysis of Norwegian *som*-relatives proposed above. In both cases there is a matching effect, which should mean that the complement of the matrix verb is NP, not TP as it presumably is both in the Bambara example in (36b) and in Norwegian *som*-relatives.

Note also in passing that the Bambara data can be taken as particularly clear evidence for the claim that relative clause complexes can in principle be propositional (presumably belonging to the category TP). Thus, such data can be taken as indirect evidence for the present version of the promotion analysis. In fact, the key difference between Norwegian *som*-relatives and Bambara relatives as exemplified in (36b), is simply presence vs. absence of promotion to the specifier of TP position. I leave the Bambara data here. The next subsection will be concerned with the matching problem in the case of *som*-relatives.

4.2 Specifier–Head Agreement in TP. Up to now I have assumed that the associate of a *som*-relative is selected by some predicate or predicate head in the matrix clause. Part of what is understood by selection is Theta-role assignment. For concreteness, assume that selection can (partly) be construed as Theta-role assignment, such that X selects Y, if X assigns a Theta-role to Y. I will assume a sisterhood condition on Theta-role assignment. Thus, an external role is assigned indirectly to an NP that is the sister of the predicate that has the assigner as its head, whereas an internal role is assigned directly to an NP that is the sister of the assigner (see Kayne 1984: IX f., Chomsky 1986b: 13-14). This means that a matrix verb cannot assign a Theta-role to a relative clause associate in a promotion configuration like (37):

(37) .... [V' V [TP NP $_i$ [T' [T som] [VP ....t $_i$ ....]]]]

Here, the sister of the matrix verb is a TP. Therefore, given the conditions for Theta-role assignment, only the TP may be assigned an internal Theta-role

from V.[10] In other words, only the TP is directly accessible for matrix requirements, contrary to what appears to be desired.[11]

Now, notice that the T-projection is very much dependent as to feature specification on the element filling its empty slot. For instance, *at* 'that' is inherently N-like, which helps to explain why TPs headed by that element has NP-like distribution; likewise, an adverbial complementizer like *før* 'before' is inherently P-like, which helps to explain why TPs headed by that element have PP-like distribution, etc. However, there is one more way a projection can acquire features, namely by agreement between specifier and head (cf. Chomsky 1986b: 24). I will assume that *som*-clauses (*som*-relatives and embedded questions) are the only type of embedded clause where that possibility is open, because *som*-clauses are the only embedded clauses that permit overt material in the specifier of TP position. Two features appear to be relevant in the present context: a referential or denotational feature, and a wh-feature. I call these features R and W, respectively. Crucially, I assume that specifier–head agreement in TP is optional, provided that either R- or W-agreement takes place, i.e. if there is R-agreement, then W-agreement is optional, and vice versa. Assume further that a wh-NP is inherently both R and W, and that a non-wh-NP is inherently R only.

Now we are faced with the following possibilities. In the case of a *som*-relative a non-wh-NP occupies the specifier of TP position. Then R-agreement with T must take place (some agreement must take place and here R-agreement is the only possibility), so the T-projection becomes referential:

---

[10] Notice that the configuration in (37) resembles a small clause configuration where the NP in (37) corresponds to the small clause subject. According to the sisterhood condition on Theta-role assignment, the small clause subject cannot receive a Theta-role from the matrix verb. That seems to be contradicted by structures like (ia), where the small clause subject appears to receive the same Theta-role as the direct object in (ib):

(i) a. Ola kjørte bilen flat.
b. Ola kjørte bilen.

However, the existence of data like (ii) indicates that the small clause subject does not receive a Theta-role from the matrix verb:

(ii) a. Ola kjørte småskogen flat.
b. *Ola kjørte småskogen.

I will assume that the small clause subject is only apparently Theta-related to the matrix verb in cases like (ia). In both (ia) and (iia), the matrix verb governs the small clause subject and assigns Case to it, but the Theta-role assigned to the small clause subject is assigned by the small clause predicate, whereas the Theta-role assigned by the matrix verb is assigned to the small clause AP. I conclude that small clauses do not constitute counterexamples to the Theta-role assignment conventions, but rather corroborate them.

[11] However, this situation is of course desirable from another point of view. If the associate is part of a Theta-chain with its foot in the relative clause base and simultaneously receives a Theta-role from the matrix clause, we are apparently faced with a blatant violation of the Theta-criterion. But on the analysis pursued here, it is technically the relative clause TP that receives a Theta-role from the matrix clause, so that the chain of which the primary associate is a member, gets its only Theta-role inside the relative clause base. Therefore, no violation of the Theta-criterion occurs.

(38) [TP [NP non-wh-phrase]$_i$ [T' [T som] [VP ....t $_i$ ....]]]
R R

Since the TP has become referential, it is an appropriate target for the relevant kind of Theta-role assignment, i.e. the TP may receive a Theta-role appropriate for referential NPs. Thus, in *som*-relatives there is no direct Theta-access to the NP in specifier position, but one might say that there is indirect access mediated by specifier–head agreement.

Consider now cases where a wh-NP occupies the specifier of TP position. Now there are three possibilities for agreement. First, there may be W-agreement with no R-agreement; second, there may be both W-agreement and R-agreement; third, there may be R-agreement with no W-agreement. The second and third possibilities will be discussed in subsection 4.3. What about the first possibility? If there is W-agreement with no R-agreement, the T-projection is not referential, which implies that it is propositional. Furthermore, it is marked with the wh-feature. I take this to mean that the structure is interpreted as an embedded wh-question:

(39) [TP [NP wh-phrase]$_i$ [T' [T som] [VP ....t $_i$ ....]]]
R, W W

In other words, the TP cannot receive a Theta-role appropriate for referential NPs, which means that there will be no matching effect with embedded questions.

Before the analysis is developed further, a striking independent motivation for the proposed feature system must be mentioned. It has been observed that certain Norwegian dialects allow or require main clause wh-question without V2 (see Åfarli 1986, Nordgård 1986, or Taraldsen 1986b). In fact, these structures are isomorphic to embedded wh-questions (i.e. they are *som*-clauses), cf. (40a). However, even these dialects require V2 in declarative clauses, as shown by the ungrammaticality of (40b).

(40) a. Kven som kom?
who that came
b. *Han som kom.
he that came

It was proposed in Åfarli (1986) that the reason why *som*-clauses may occur as main clauses at all, is that *som* in the relevant dialects is unspecified for the feature +/-V, but that assumption left the ungrammaticality of (40b) unexplained. However, assuming the analysis given above, the contrast displayed here is explained. Consider (40b). Here *han* is inherently marked as R only. That means that the T-projection must become referential, which is incompatible with it being a propositional main clause TP. Therefore, such clauses are

ungrammatical even in dialects where *som* is not excluded from the T-position of main clauses for other reasons. In (40a), on the other hand, there is a possibility that only W-agreement takes place, so the TP may be interpreted as propositional, which explains that it may occur as a main clause in dialects where *som* may otherwise head a main clause T-projection. This constitutes the independent motivation for the proposed feature system.

4.3 Free Relatives. Consider the second and third possibilities mentioned above, both involving R-agreement between T and a wh-NP in the specifier of TP position. Since R-agreement takes place, the TP must receive a Theta-role appropriate for referential NPs and the wh-NP exhibits the matching effect, i.e. the TP will be just like a relative clause complex in that respect. In other words, the TP is what is commonly called a free relative. Thus, the very existence of free relatives is directly predicted in this system.

Now, the R-agreement found with free relatives may optionally be accompanied by W-agreement. I propose that presence vs. absence of this accompanying W-agreement distinguish two subtypes of free relative. First, there are free relatives like the one in (41a) with what I will call a "whatever-interpretation" (with the wh-phrase typically receiving emphatic stress). Under this interpretation (41a) is synonymous with (41b):

(41) a. Han kjøper kva du har.
'He buys what you have.'
b. Han kjøper kva som helst som du har.
'He buys whatever you have.'

I will assume that this interpretation is correlated with the feature configuration shown in (42):

(42) [TP [NP wh-phrase]$_i$ [T' [T som] [VP ....t $_i$ ....]]]
R,W R,W

Second, there are free relatives with a wh-associate like the one in (43a), where the wh-form of the associate is accidental so to speak. The wh-phrase has no emphatic stress and the interpretation is analogous to the relative clause complex shown in (43b):

(43) a. Han kjøper kva du har.
'He buys what you have.'
b. Han kjøper det du har.
'He buys the things you have.'

I will assume that this interpretation is correlated with the feature configuration shown in (44):

(44) [TP [NP wh-phrase]$_i$ [T' [T som] [VP ....t $_i$ ....]]]
R,W R

Observe that the instances in (39), (42), and (44) really exhibit one single syntactic form, where the only differing properties are which agreement features are "transmitted" to the T-projection. From one perspective it is the matrix verb that determines how the form is interpreted, by requiring different combinations of R- and W-features related to the T-projection. This once again brings home the point that syntactic forms are often multifunctional.

As already noted, the very existence of free relatives is predicted by the analysis pursued in this article. This is a very desirable result. Moreover, the analysis of free relatives presented above seems to be the minimal analysis possible for free relatives within the framework that is assumed. In that respect it may be compared to previous analyses, where the free relative construction typically has been considered to be some sort of exceptional construction. In particular, previous analyses have found it hard to reconcile the two facts that free relatives seem to be like embedded questions structurally, while simultaneously showing matching effects. For instance, Bresnan and Grimshaw (1978) capture the matching effect by placing the wh-phrase outside the relative clause, thereby loosing the relationship with embedded questions. On the other hand, Groos and van Riemsdijk (1981) quite appropriately place the wh-phrase in COMP (which corresponds to the specifier of TP position in my analysis), but invokes a special accessibility device postulated only for free relatives to account for the matching effect.

I want to end this article by explicitly pointing out one result of the analysis that has been only implicit until now. If a TP with a wh-NP in the specifier of TP position may be interpreted as either propositional or referential (i.e. as either embedded questions or free relatives), why are not both these interpretations available for a TP with a non-wh-NP in the specifier of TP position? In other words, why cannot the complement of the matrix verb in (45a) have a propositional interpretation for instance analogous to the *at*-clause in (45b)?

(45) a. *Han sa boka (som) du har.
he said book-the (that) you have
b. Han sa at du har boka.
'He said that you have the book.'

There is a straightforward explanation for this. In fact, (45a) is ungrammatical for the same reason as the dialect main clause declarative in (40b) is. Consider the agreement possibilities:

(46) [TP [NP non-wh-phrase]$_i$ [T' [T som] [VP ....t $_i$ ....]]]
R R

Since the initial NP is a non-wh-phrase, there is only one agreement feature (R), which must obligatorily agree with the T-projection. Therefore, the TP is referential, which excludes a propositional interpretation.

5. Concluding Remarks

In this article, I have argued in favour of a promotion analysis of *som*-relatives in Norwegian. In the variant of the promotion analysis proposed here, the relative clause associate is promoted from inside the relative clause base into the specifier of TP position. Several facts conspire to motivate such an analysis. First, the overall design for sentence structure in Norwegian suggests a promotion analysis of this kind. Second, several empirical facts point toward a promotion analysis. These are facts involving idioms as well as facts involving binding and co-reference possibilities of anaphors and pronouns. Also, a quite striking asymmetry between *som*-relatives and *der*-relatives suggests that a promotion analysis is appropriate for the associate of the *som*-relative. To explain the matching effect, an analysis involving specifier–head agreement in TP was proposed and independently motivated. Given that analysis, it was explained why relative clause TPs must show the matching effect, whereas embedded clause TPs cannot. Also, the existence of free relatives was directly predicted by the analysis.

References

Bird, Charles S. (1968) "Relative Clauses in Bambara", *Journal of West African Languages* 5: 35-47.
Bresnan, Joan & Jane Grimshaw (1978) "The Syntax of Free Relatives in English", *Linguistic Inquiry* 9: 331-391.
Chomsky, Noam (1973) "Conditions on Transformations", Anderson & Kiparsky (eds.) *A Festschrift for Morris Halle*, Holt, Rinehart, and Winston.
Chomsky, Noam (1977) "On Wh-Movement", Culicover et al. (eds.) *Formal Syntax*, Academic Press.
Chomsky, Noam (1982) *Some Concepts and Consequences of the Theory of Government and Binding*, MIT Press.
Chomsky, Noam (1986a) *Knowledge of Language*, Praeger.
Chomsky, Noam (1986b) *Barriers*, MIT Press.
Groos, Anneke & Henk van Riemsdijk (1981) "Matching Effects in Free Relatives: A Parameter of Core Grammar", Belletti et al. (eds) *Theory of Markedness in Generative Grammar*, Scuola Normale Superiore di Pisa.
Hellan, Lars (1988) *Anaphora in Norwegian and the Theory of Grammar*, Foris.
Kayne, Richard S. (1984) *Connectedness and Binary Branching*, Foris.
Nordgård, Torbjørn (1986) "COMP-features and Word Order", Dahl & Holmberg (eds.) *Scandinavian Syntax*, University of Stockholm.
Schachter, Paul (1973) "Focus and Relativization", *Language* 49: 19-46.
Taraldsen, Knut Tarald (1977) "The Scope of *Wh* Movement in Norwegian", *Linguistic Inquiry* 9: 623-640.
Taraldsen, Knut Tarald (1986a) "*Som* and the Binding Theory", Hellan & Koch Christensen (eds.) *Topics in Scandinavian Syntax* , Reidel.
Taraldsen, Knut Tarald (1986b) "On Verb Second and the Functional Content of Syntactic Categories", Haider & Prinzhorn (eds.) *Verb Second Phenomena in Germanic Languages*, Foris.
Vergnaud, Jean-Roger (1974) French Relative Clauses, unpublished Ph D Thesis, MIT.
Åfarli, Tor A. (1986) "Absence of V2 Effects in a Dialect of Norwegian", Dahl & Holmberg (eds.) *Scandinavian Syntax*, University of Stockholm.
Åfarli, Tor A. (1991) "On Sentence Structure", *Lingua* 84: 215-238.
Åfarli, Tor A. (1992) "Seeds and Functional Projections", *Working Papers in Scandinavian Syntax* 50: 75-86, University of Lund.

THE CASE FOR A 'PROGRESSIVE' DERIVATIONAL AFFIX IN KISWAHILI PREDICATE ITEMS

Assibi Apatewon Amidu
University of Trondheim, Norway.

1.0. INTRODUCTION

In Amidu(1993b), we looked at some aspects of the Kiswahili predicate derivational system, notably the rules of vowel harmony in the 'Applicative' and 'Reversive'/'Regressive' affixes. We did not look at the structure of the derivational affixes(d-affixes) themselves. The treatment given to the 'Applicative', 'Reversive' affixes in Kiswahili studies both past and present(cf. Ashton(1947), Polome(1967), Whiteley(1968)) does not, therefore, bring out other possible generalizations about these morphemes. In this paper, we shall revise the structure of the 'applicative' and some of the rules which are currently used to describe the 'Applicative' and the 'Reversive' derivational affixes and go on further to argue that there is, in addition to the 'Applicative', a 'Progressive' derivatioanl affix(d-affix) which has mistakenly been conceived of as a reduplication of the 'applicative'. We shall provide two rules of antecedent usage, namely, 'The Derivational Mirror-Image Constraint' and 'The Sequential Derivational Constraint' which, we hope, will demonstrate linguistic empirically that there is no reduplicated form of the 'applicative' but rather a distinct d-affix called the 'PROGRESSIVE'. We shall also claim that the structure and function of the 'reversive' is in many ways the opposite of that of the 'applicative', revealing a feature of dynamism which underlies d-affixes.

2.0. TRADITIONAL ASSUMPTIONS ABOUT THE 'APPLICATIVE'

In our earlier paper(cf. Amidu(1993b), we discussed the sound change and harmony rules that affect the 'applicative' and 'reversive' derivational affixes in Kiswahili as well as the forms of the d-affixes used in the language . In traditional grammatical descriptions, the 'applicative' is a predicate item morpheme which is 'prepositional' in meaning or function in a predicate item(p-item). Scholars use the term 'prepositional' because glosses of p-items which have this affix are usually followed by prepositions in languages, especially the favoured Indo-European languages like English, and French. An example is {soma} --> 'read', but {somea} --> 'read about, to etc'. Scholars of Bantu grammar, such as Ashton(1947:218-220), have stated this view explicitly for Kiswahili and other Bantu languages. In addition to recognizing the 'applicative' or 'applied' or 'prepositional' affix, traditional grammarians have claimed that the 'applicative' has a reduplicated form in the form of ILIA/ELEA(Ashton p.244ff) or as '{ELEL}, realised as -ili- or -ele- before final vowel'(cf. Polome(1967:84). The following are cases of the traditional applicative and its reduplicated forms:

Applicative >#I#

This d-affix has traditionally been treated as consisting of a simple applicative form and a reduplicated form.

(1)	Simple App. > i, e.	Reduplicated App. > ili, ele.
	fiki+a >fikia(arrive at)	fikili+a >fikilia(get right there)
	kati+a >katia(cut for, with)	katili+a >katilia(cut off completely)
	ende+a >endea(go to)	endele+a >endelea(progress)
	weke+a >wekea(put down for)	wekele+a >wekelea(keep away)

Now, what happens if the root ends in a vowel? It has been argued by many Kiswahili scholars such as Ashton(1944,1947), and Polome(1967:84) that where the root ends in a vowel, the allomorph of the affix #I# becomes /li, le/ for the simple applicative. But we are not told by any scholar what the reduplicated form becomes in the environment of a vowel in final position of a p-root. It appears as if the so-called reduplicated form never occurs before simple roots which end in vowels. In the examples given above, 'fika'(arrive) is the stem of a predicate item. It consists of the root {fik} and the modalic indicative {a}. The 'applicative' is said, by traditional grammarians, to be 'fikia'(arrive at) and the reduplicated 'applicative' is 'fikilia'(arrive there), (cf. Polome, p.84). However, the difference between say 'tilia' and 'tililia'(see infra) cannot be a simple case of doubling of the applicative morpheme #I#. We shall demonstrate that such an analysis is not convincing. The first two problems we encounter in applying the traditional method has to do with roots which end in vowels:

(2)	a) Simple App.(with #li, le#) /- V	b) Redup. App.(#ili, ele#) /V.
	pa+li+a > palia(clear away)	*pa+ili+a > pailia(gather together
	ti+li+a >tilia(put into)	*ti+ili+a > tiilia(push through)

The problem with a description like this is that we are forced to the conclusion that a p-base, such as PA or TI, which ends in a vowel either has no reduplicated form at all or else we are forced to resort to adhoc rules to explain the similarities between different forms. This can lead to completely unacceptable forms or to indistinctness or indeterminacy of both lexical forms and morphemic forms. Thus, firstly, a rule of assimilation could yield 'tilia' in (2b) as well, especially if we allow [i] + [i] to become [i] under (2b) as a feature of vowel assimilation in order to produce an acceptable lexical item. The product of the assimilation even though an acceptable item is not the so-called reduplicated form of TI. The correct form is 'tililia'. We notice, at once, that even a sound assimilation attempt fails to yield the correct form. We get the same result with PA because an assimilation of [a] to [i] becomes [e] and this gives

*pelia. There is no lexical item 'pelia' in Kiswahili. The correct derivation should yield 'palia' but that is not the so-called reduplicated form which is 'palilia'. Secondly, indistinctness of lexical forms do come about as in the following cases:

2c)	Basic rt. + Simple App.	Basic rt. + Redup. App.
	ondo+le+a > ondolea(take away)	
	*ondo+ele(/o/+/e/>/o/)>ondole+a > ondolea(strip off)	
	pote+le+a > potelea(wander off) >potele+a >	*pote+ele(/e/+/e/>/e/) potelea(be damned)

Another way to deal with the traditional form called the reduplicated {ili/ele} after vowels(this is the second problem we encounter) is by analogy with the description given for the applicative #I#. The analogy can be formulised in the following manner:

Rule ==>If #I# --> i, e /- C or li, le /-V then {ili} --> ili, ele /- C or lili, lele /-V.

The analogy here inserts /l/ in the so-called reduplicated in the same way that the non-reduplicated is given an /l/ consonant. We may call this the '/l/ **insertion rule**'.This is illustrated by (2d) below:

(2d.i) Simple App.(with {li, le}) /- V	2d.ii) Redup. App.({ili, ele}) /- V. Insert /l/ before d-affix.
pa+li+a > palia(clear away)	pa+ili+a > pa+(l)+ili+a > palilia(gather together)
ti+li+a > tilia(put into)	ti+ili+a > ti+(l)+ili+a > tililia(push through)

This gives us the correct derivations. However, this analogy is a false one and we shall return to it later below. All that needs to be emphasized here is that this analogy is not actually stated in this way by traditional grammarians. It is implied or perhaps assumed by grammarians but we shall not speculate on this further. The analogical assumption above raises a serious problem of allomrphy in the grammatical description of the language and in morphology. Is there one morpheme #I# and if so is the reduplicated form an allomorph of #I#? If the answer is in the affirmative as traditional grammars suggest, the question is how many allomorphs are allowed for #I# and how can these be derived from the underlying structure of #I# without redunancy and superfluity? And is it possible for an allomorph to have its own allomorphs in phonology? This is the conclusion of the reduplicated analogy. We can 'feel' immediately the inadmissibility of the reduplicated claim. If the reduplicated

{ili, ele} is derived from #I# by implication and analogy then it should not morpologically display features of allomorphy. If, on the other hand, {ili, ele) is not an allomorph of 'applicative' #I#, then, it is difficult to explain in which way it is a reduplication and not a distinct morpheme 'in esse'. It follows that our assertion that there is no reduplicated form of the 'applicactive' is morphologically and phonologically sound and only needs to be demonstrated concretely.

It seems clear from the onset that any modification of the d-forms will make a simple 'applicative' item to look like a reduplicated one and vice-versa. This makes it hard to distinguish between them. This probably explains why 'potea' and 'ondoa' do not appear to have reduplicated forms in traditional anayses even though one feels somehow that the 'semantic' implication behind a so-called reduplicated form can be made in Kiswahili usage for 'potea' and 'ondoa' if a speaker wanted to do so(Refer to the glosses of (2c) given above). Grammatically, however, one but not the other will always be unacceptable as a lexical item as we have just shown above by asterisk marking. Besides, it is unempirical for the same rule, reduplicated d-form, to operate inconsistenly. It seems that the fault lies not with the rule but the claims about the form of the marker. Furthermore, the problem of indeterminacy is a serious problem since the reduplicated claim only applies to p-roots which end in consonants and this cannot constitute the basis of a general rule about the funtion of the so-called reduplicated form. Half a rule is no rule. It follows that there is complete justification in rejecting the claims about a reduplicated form of the 'applicative' which only seem to apply accidentaly to p-roots with consonantal endings.

On the grounds of meaning also, we can see that the present situation does not allow for other important linguistic generalizations, namely, the fact that the two forms(simple/redupl.) contrast in many environments and are distinctive of meaning.

Our suggestion is that rather than maintain the status quo, it would be more linguistically empirical to recognise that we are in fact dealing with two affixes which are distinct and unrelated. We propose the following analysis:-

3. Applicative => #LI# ---> i, e /- __C
---> li, le /- __V

4. Progressive => #LILI# ---> ili, ile __C
---> lili, lele __V

This representation of the morphemes/morphophonemes is, in our view, more accurate.The traditional representation of the morpeme as #I# or #E# usually inserts a consonant /l/ in the environment of p-roots which end in vowels as demonstrated earlier on. This practice is, in our view, contrary to the evidence in the general phonology of the language. We, therefore, reject it. In Kiswahili phonetics and phonology, it is vowels which tend to be inserted between consonant clusters and not consonants inserted between vowels. We take this, therefore, as the natural rule of sound change. In the same manner, it is the

consonants, mostly /l/ and /w/, which are often lost intervocalically. This is attested in older literatures of the language dating from the 17th century(cf. Harries(1962), Knappert(1979))) and in modern works from the Northern Kiswahili coast(cf. Amidu(1990)). We again take this as the natural law of change. These are well know in Bantu phonology in general(cf. Tucker and Ashton(1942), Polome(1967), Doke(1954,1967) and Meinhof(1932)). It has been argued that the consonant /l/ reappears during the derivational process(cf. Polome(1967)) but then there are so many exceptions to this claim as to require a more detailed study. It is, therefore, the unempirical selection of the affixes which in part accounts for the difficulties in the derivational process outlined above.

3.0. JUSTIFYING APPLICATIVE AND PROGRESSIVE DISTINCTIONS

The case for the 'progressive' affix is motivated by syntactic and morphological considerations. In the first place, we may observe that the distinction between pigia(strike at) and pigilia(pound), for example, is one of "movement in a direction to/at/by/of/for/from/with etc a target" on the one hand, and "a 'target-tensing' or 'intense-progression' of the action of the simple basic root or stem" on the other, with or without directional implication. Consider in this regard the syntax of the predications below:

5) Mtoto alipiga sakafu (the child beat the floor)
6) Mtoto alimpigia sakafu mwalimu (the child beat the floor for the teacher)
7) Mtoto alipigilia sakafu (the child pounded(threshed) the floor)

The data (5-7) illustrate the constraints in the use of the forms (3) and (4). The datum (5) contains the simple predicate item 'piga'(beat, hit etc.) with A1 --> mtoto, A2 --> sakafu. In the datum (6) the p-item is 'pigia'. It has a d-affix /li/ which implies the beneficiary of the action of the p-item 'piga'. The relational matrix is A1 --> mtoto, A2 --> sakafu, A3 --> mwalimu, where A3 has the beneficiary. The datum (7) has d-affix /lili/ with A1 --> mtoto, A2 --> sakafu. We can see in the data that (5) and (7) are structurally alike. This shows that the syntactic constraints on 'piga', 'pigia' and 'pigilia' are not exactly the same, but there is a closer syntactic relationship between (5/7) but not necessarily (6). We find in antecedent usage the following also:

8) Mtoto alimpigilia sakafu mwalimu (the child beat the floor well for the teacher)

The form 'pigilia' is used sometimes where 'pigia' would have been used with a modifying adverb such as 'sana'(well), and would appear to support in part the traditional theory of reduplication, i. e. (7) comes from (6). It does not, however, explain (7) which is not a reduplication of (8) or (6) but comes directly from (5) as an extension in itself. Let us look at other cases:

9) Mtoto ali(pa)kwenda mjini (the child went to town)
10) Mtoto ali(i)endea njia hii (the child went by this road)
11) Mtoto alimwendea mwalimu (the child went up to the teacher)
*12) Mtoto ali(i)endelea njia hii (the child went completely by this road)
*13) Mtoto alimwendelea mwalimu (the child went right up to the teacher)
14) Mtoto aliendelea na masomo yake (the child went on with his studies)

The data (9-11) are structurally alike, with 'mtoto' at A1 and 'mjini, njia hii, and mwalimu' all at A2. The idea of progression is the same for all these predications. However, the form 'endelea' in 12-13 cannot occur in a similar structure as (9-11). We have structures like (14) in Kiswahili with the constraint that the A2 in the predication is a PP introduced by the preposition 'na'. This restriction does not affect the structural patterns of 'endea' (10-11) at all in predications. This underlies the fact that 'endelea' is not a reduplicated form of 'endea' in (10-11) but is derived directly from 'enda' in (9) or as per (15) but not (16):

15) Mtoto alikwenda na mwalimu wake(the child went with his teacher)
?15b) Mtoto aliendelea na mwalimu wake(the child went on with his teacher)
*16) Mtoto aliendea na njia hii/mwalimu wake

Thus while we do not dismiss the claim of reduplication in the sense of a possible allomorph of the traditional 'applicative/prepositional ' d-affix (even though it has to be justified empirically as existing in Kiswahili), we believe that the syntactic evidence shows clearly that there is a d-affix morpheme distinct from the 'applicative' and which is, therefore, not allomorphic. The form in (7), (14) and (15b) is what we call 'progressive' here and which we suggest should be recognized in its own right.

Our argument, therefore, is that #LI# and #LILI# cannot constitute a single morpheme but rather they are separate morphemes, and the one does not derive from the other and vice-versa. The fact that the contrasts /li, le/ versus /lili,lele/ or #LI# versus #LILI# occur in many predicate lexical items shows that it is, grammatically, a significant contrast which should be given appropriate recognition. For this reason, we propose to retain the term 'applicative' for affix #LI# but propose a term 'progressive' for #LILI#.

The result of our analysis means that all p-roots can, theoretically, have a 'progressive' form and an 'applicative' form without any constraints on the nature of the p-root. The data below illustrate the significant difference between the two forms.

(17) Basic rt + Indicative affix [a] Basic rt + #LI# + Ind. affix [a]

Consonant Ending in P-rt.

fik+a --> fika (arrive)	fik+LI+a --> fikia (arrive at/with)
pamb+a –> pamba (decorate)	pamb+LI+a –> pambia (decorate with)
lip+a --> lipa (pay)	lip+LI+a –> lipia (pay for)
pig+a --> piga (beat)	pig+LI+a --> pigia (beat at/for)
shind+a --> shinda (press)	shind+LI+a –> shindia (press on/at)
on+a --> ona (see/feel)	on+LI+a --> onea (see for/ feel for)
og+a --> oga (bathe)	og+LI+a –> ogea (bathe with)
let+a --> leta (bring)	let+LI+a --> letea (bring to/for)
wek+a --> weka (place)	wek+LI+a -->wekea (place at)
end+a --> enda (go)	end+LI+a --> endea (go to/by)

Vowel Ending in P-rt.

pa+a --> paa (clean, scrape)	pa+LI+a --> palia (clean for/ scrape up)
ti+a --> tia (put)	ti+LI+a -->tilia (put into/onto)
pote+a -->potea (be lost)	pote+LI+a --> potelea (be lost at/for)
ondo+a --> ondoa (remove)	ondo+LI+a --> ondolea (remove from)

(18) Basic rt + Indicative affix [a] Basic rt + #LILI# + Ind. affix [a]

Consonant Ending in P-rt.

fik+a --> fika (arrive)	fik+LILI+a --> fikilia (attain, reach)
shind+a --> shinda (press)	shind+LILI+a --> shindilia (ram)
pig+a --> piga (beat)	pig+LILI+a --> pigilia (pound)
on+a --> ona (see)	on+LILI+a --> onelea (scorn, despise)
og+a --> oga (bathe)	og+LILI+a --> ogelea (swim)
wek+a --> weka (place)	wek+LILI+a --> wekelea (preserve)
end+a --> enda (go)	end+LILI+a --> endelea (progress)

Vowel Ending in P-rt.

pa+a --> paa (clean/scrape)	pa+LILI+a --> palilia (pile/heap)
ti+a -->tia (put)	ti+LILI+a --> tililia (poke)

One of the strong motivations for accepting the 'progressive' and 'applicative' distinction can be seen in the fact that the traditional distinction if maintained leads to a generalization that does not fit the data:

(19) a) Traditional Appicative morpheme #I# =/=> ##__V

b)Traditional Reduplicated Applicative allomorph [ili, ele] =/=> ##__V

In the above rules, we realise that the 'applicative' (19a) is the morpheme and the reduplicated form is not a new morpheme but an allomorph (19b) of (19a). This is significant. The rule (19a) may be illustrated as follows:

20) /kat/ + #I# –> kati (< kata 'cut')

*21) /pote/ + #I# –> potee (< ?potea 'be lost)

It is to compensate for the anomaly in (21) that traditional grammar has suggested that #I# becomes an allomorph /li, le / according to vowel harmony after vowels by inserting a consonant /l/ before #I# by some trigger mechanism. The /l/ insertion is also based on diacronic assumptions that p-items which end in vowels originally had consonant endings and that this is /l/. We shall not attempt dispute this assumption. But there are more substantive reasons against the reduplicated form which (19-21) reveal. The stronger objection to the reduplicated claim is can be stated as follows:

> 19c) 'An 'allomorph' which is independently distinctive of meaning is no longer an allomorph but an independent morpheme. It has a unique context of reference.'

If we accept (19a-c) as a correct formulation, then the role of the reduplicated allomorph becomes unclear. If we admit reduplication, then the allomorph /li, le/ becomes redundant and vice-versa. It is doubtful whether both /li, le/ and /lili, lele/ can be said to be the allomorphs which occur after roots which end in vowels. Since they occur in the same envronments, there is no motivation for alternant forms brought about by specific phonological or morphemic criteria. That is, if /ili, ele/ were semantically significant, (i. e. distinctive of meaning between the /li, le/ on the one hand and /ili, ele/ on the other) then we would be dealing with distinct morphemes altogether and not a case of phonological modification of same morpheme(allomorphy) without semantic change. All grammarians, however, seem to agree that the so-called reduplicated form is often semantically distinctive and has what is called an 'intensive' meaning. Nevertheless, the form #LILI# has been treated as an extension of #LI# but the rule of phonological versus semantic significance does allow #LILI# or /ili, ele/ to be both allomorphic and significantly distinctive of meaning at the same time. It is either an allomorph or a morpheme. The semantic criterion suggests that the reduplicated form is a morpheme in its own right.

3.1. **The Allomorph Within Allomorph Constraint**

We have seen that even though the reduplicated form may occur after consonants, it cannot, as we have already shown, occur after vowels except by analogy. If on the basis of analogy with /li, le/ we introduce a form /lili/ as well as /ili/ then the reduplicated form is either in competition with #I# as morphemes for the same morphological structures or else #I# has a large number of allomophs viz: [i, e], [ili, ele,] after consonants and [li, le], [lili, lele] after vowels. The proliferation of allomorphs which result from the traditional claims makes it evident that [ili, ele] cannot be allomorphs of #I# and have its own allomorph [lili, lele] at the same time. We, therefore, wish to claim that

morphemes do not allow for allomorph within allomorph in their structure. No where in the p-item derivational system does this 'a-within-a' phenomenon arise. We assume that it is barred by all grammars. Therefore, [ili, ele] is not an allomorph of #I#.

4.0. IN DEFENCE OF A PROGRESSIVE #LILI#

Now that we have demonstrated that the so-called reduplicated [ili, ele] is not an allomorph of #I#, the alternative approach is to view it as an independent morpheme. As a morpheme in its own right, it is also a derivational affix in its own right. The morphemic shape of the 'progressive' is, therefore, #LILI# or {lili}. Turning the traditional argument for reduplication on itself, we arrive at the conclusion that a derivational affix exists in Kiswahili which is not an extension of the applicative. It is subject to particular morpho-syntactic constraints which are not the same as for any other derivational affix and for this reason should be recognised as a d-affix in its own right called 'progressive d-affix'.

There are two very strong theoretical arguments and generalizations which support our hypothesis. The first is what we wish to call the 'Derivaional Mirror-Image Constraint' and the second is what we wish to called the 'Non-Sequential Derivational Constraint'.

4.1. The Derivational Mirror-Image Constraint

Let us take [t] as the phonological realisation of some morphemes A, B, etc.,. If we apply this to Kiswahili d-affixes we get a rule (22),

22) Rule,
If A --> [t_i] and B --> [t_j], then [t_i] and [t_j] are mirror images of [t]. But A -/-> B and vice versa.

The rule (22) states that any two or more morphemes may be realised by the same phoneme or allophones of a phoneme but the morphemes remain nevertheless distinct and non-interchangeable. We find in Kiswahili the following forms of predicate items(verbs):

A ==> #w# passive d-affix
23) pig+w+a 'be beaten' (>passive of piga 'beat')

24) pik+w+a 'be cooked' (>passive of pika 'cook').

B ==> #w# (<#U#) reversive d-affix
25) ch+w+a 'set' of sun (>reversive of cha 'rise')

26) ny+w+a 'drink' (>reversive of nya 'drop' like rain)

In the data above, we see that both the passive and the reversive can be realised in certain(but by no means all) environments as a bilabial glide consonant [w]. Whereas labialization is the result of sound change in the reversive d-morpheme, it is only accidental in the passive d-morpheme. The labial realisations are mirror images of passive and reversive morphemes but passive morpheme is not the same as or interchangeable with reversive morpheme.

We may now extend this rule to cover the 'progressive' d-affix and 'applicative' d-affix proposed above. Even though the applicative #LI# and progressive #LILI# may realise similar phonological forms, they are in such cases only exhibiting mirror image characteristics due to sound change but are not the same morpheme, or even extensions of the same morphemes and are not interchangeable.

It is possible to argue that the passive in protoBantu was a back vowel /u/ which has become labialised before final vowels in the same way that the reversive is a back vowel /u/ derived from #LU# which becomes labialised before monosyllabic p-roots and before a final vowel; and both conditions must obligatorily be present for the change to come about. Such a generalization, though interesting, adds nothing new as such to our knowledge of the functions of d-affixes as a whole except the principle of mirror image which results from sound change. Significantly, however, it would be patently absurd to argue that the 'Passive' **is a labialised form** of the 'Reversive' affix. Derivational affixes may phonologically be alike or reaslized as similar forms but the affixes are not alike in themselves.

4.2. **The Sequential Derivational Constraint**

The sequential derivational constraint we have found in Kiswahili is as follows:

27) Rule

(i) P --> P+p....o --> Ppo
E.g. PIG --> pig+a --> piga 'hit'

(ii) P --> P+p..(1, 2, 3, ..n)..o --> Pp1o, Pp2o, Pp12o etc
E.g. PIG --> pig+LI+a --> pigia, pig+w+a --> pigwa,
pig+LI+w+a --> pigiwa, etc.

(iii) *P --> P+pn..(n1, n2, n3, ..)..o --> Ppnn1o, etc.
E.g. *PIG --> pig+w+w+a --> ?, pig+an+an+a --> ?,
pig+LI+LI+a --> ?

The rule (27.i) states that a predicate form *P* becomes a predicate item by the addition of predicate affix *p* which in the indicative form is an affix *o* . (27.ii) states that derived forms of *Ppo* can be formed by the addition of other *p-affixes* labelled 1, 2, etc.. Combinations of these are permitted by the rule. (27.iii), however, states that no two consecutive *p* can be the same or have the same value. This means that no d-affix can repeat itself or modify itself. An affix may only modify another form distinct from itself.

We find in the whole of the Kiswahili derivational system that the above rule is a significant generalization. It holds true of all p-item derivational affixes, including p-items formed by predicatization. The claim that there are double forms of affixes in Kiswahili p-item derivations has been disputed and refuted in Amidu(1993b). The problem, therefore, with the claim of reduplicated affixes of existing grammatical and linguistic works is that it violates a linguistic empirical rule of the Kiswahili derivational morphology and perhaps of other similar rules of derivation in languages of the world. Recursivity of any affix, if it does take place, occurs alternately and not consecutively. Theoretically, this means that a derivation Pp1+2+1+2+1 or Pp1+2+1+3+1 is possible(even though none has been found in antecedent usage) in addition to the more usual forms found in antecedent usage such as (27ii) Pp1+2+3+4+o as the data (28) and (29) illustrate.

28) Mpishi alimpiganishia watoto mfalme(the cook made the children to fight for/with the king)

({root {pig}+associative {an}+causative {sh} +applicative {li} +indicative {a}})
1 2 3 o

29) Watoto walipiganishiwa mfalme na mpishi(the children were made to fight for or with the king by the cook)

({rt {pig} +associative {an} +causative {sh} +applicative {li} +passive {w} +
1 2 3 4
indicative {a}})
o

It is clear from the 'mirror image constraint' and the 'sequential constraint' in Kiswahili that #LI# and #LILI# can only be two distinct d - morphemes, an APPLICATIVE and a PROGRESSIVE, whose glosses have, mistakenly, been assumed to determine their morphological forms and morpho-syntactic functions.

5.0. **THE REVERSIVE => #LU#**

The 'reversive' affix is used to indicate the converse of the basic meaning of a p-item. It comes immediately after the root. The rule for the 'reversive' was stated in(Amidu(1993b) as follows:

30) #U# ---> /u / /- /i, u/ (< P. rt)
---> /u/ /- /e, a/ (< P. rt)
---> /o/ /- /o/ (< P. rt)

E.g.,
tega(catch in a trap) tegua(remove from a trap)
songa(press on) songoa(strangle, twist off) etc.,

Firstly, we wish to point out that there is a shortcoming in the above rule. The above rule of the 'reversive' does not account for labialization of #U# as was described earlier on (and neither does any traditional description of it) even though the possibility has been mentioned in Johnson(1939:45, 343). We shall propose a correction to the rule further on in (32). Secondly, we would like to make a small general observation about the term 'reversive' and suggest an alternative one. Let us begin with this last subject.

The 'reversive' affix behaves in a way that is interesting. There are several cases of 'reversive' which do not imply the converse of an act. E.g.,

31) fyeka(weed)	fyekua(weed off)
chuna(skin)	chunua(take off skin or covering)
sumba(be troubled)	sumbua(worry, trouble someone)

From the foregoing, it would seem that even the term 'reversive' is not the most adequate for describing these forms in Kiswahili. Perhaps a term 'regressive' would be more appropriate. 'Regressive', in our view , does not necessarily imply the converse of an act but merely the absence of 'progression' of an act. This absence of progression may work in the opposite direction thus producing a converse or reversive act but it need not always be so. In this regard, we propose that the 'reversive' is in fact the counterpart of a morpheme which we have called 'applicative' and which has affix #LI# in Kiswahili.

In the light of our generalizations concerning an applicative and a progressive morphome above, our 'reversive' description can be modified since an identical phonological rule applies in its mopho-syntax. We assume on the analogy with our applicative that the 'Regressive' or 'Reversive' morpheme is #LU# rather than #U/. The reversive(regressive) rule will now look like this:

32) Reversive => #LU# ---> u, o /- __C
---> w /- __C, iff no V in P. rt.
---> lu /- __V, iff V of d-affix.

The rule (32) has inserted the feature of labialization which takes place when the affix occurs in a monosyllabic root by making it explicit that [w] occurs only if no vowel whatsoever occurs in the p-root. Only monosyallabic roots satisfy this criterion. This means that if the vowel harmony rule cannot apply, then #LU# becomes #Lw# and finally /l/ --> ø before a consonant, and this leaves /w/ as an allomorph of #LU#. The allomorphs of #LU# are, therefore, [u, w, o, lu] and not [u, o] as found in existing works.

One of most striking differences between the 'reversive' and the 'applicative' can be seen in the following valid restriction imposed on the morpho-syntax of the 'reversive' by p-roots, but not derived stems:

#LU# =/=> ##----V iff V in P-rt.

The above rule suggests that #LU# never occurs before any p-root which ends in a vowel. E.g.,

sikia(hear)	*sikua
chukua(take)	*chukua
potea(be lost)	*potua / *potoa
elea(float on water)	*elua

Our general rule above, therefore, specifies only that #LU# may occur after a p-stem i.e. an extended form of a root which ends in a vowel. E.g., [pepeRUka](be wafted), where /l/ => /r/ and the stem is an 'applicative' [pepe]. In protoBantu /l/ and /r/ were allophones. Examples of such words are the exception rather than the rule in Kiswahili today. The allomorph /lu/ though not very common, is nevertheless attested in some modified p-items.

The fact that #LU# cannot occur after p-roots which end in vowels is what we find significant and intriguing since all other d-affixes occur after p-roots which end in vowels. This is supportive evidence of the thesis that not all the derivational affixes which look alike behave in like ways as is sometimes proposed by past and present Kiswahili linguists and grammarians(such as the distinction between #LI# and #LILI#). In fact, we see that #LU# behaves in p-roots in a way quite opposite to our 'applicative' #LI#. That is, #LU# occurs only after consonants in p-roots and has no allomorphs for roots beginning with vowels. This suggests that, in Kiswahili, there were three derivational morphemes which could be realised as vowels after derivation i.e.#LI, LU, A#,(perhaps #A# was #LA# in protoBantu) but only the first two are preceded by the same consonant in relation to a root. Since these are the only productive d-affixes which have the potentiality of being realised as vowels, it is plausible to expect that they should behave morphologically in identical ways, but that is exactly what does not happen. The other morpheme is the #a# or 'modalic' affix(as we have called it elsewhere in Amidu(1993b)) which now regularly functions as an indicative marker in order to complete the word structure of a p-item. This is the affix which is clearly suffixed/suffixable at the end of each of the examples given above. We wish to observe, further that #LI# and #LU# have different derivational potentials. The morpheme #LI# is fully 'dynamic' but the morpheme #LU# is partially dynamic. Compared with #LI#, #LU# is somewhat [-dynamic]. The feature '**±dynamic**' may be used to distinguish d-affixes.

(33) Rule:

An affix is dynamic iff it can be added to any p-root and any other d-affix, and other d-affixes may be added on to it.

The affix #LU#, as we have shown above, does not occur after a p-root which ends in a vowel. Furthermore, it can occur after other d-affixes but in a limited way and so satisfies the rule of dynamism stated above only to a limited extent. The affix #LI# satisfies the rule (33) in many instances. E.g. :

ping+an+LI --> pingania(object to), but *ping+an+LU -->
*piganua;
pind+LU+LI --> pindulia(overthrow) but *pindLI+LU -->
*pindilu.

These examples show that the recursivity of #LU# is low. Polome(1967:91-92) has already shown that other affixes #am#, #at# cannot be added to other affixes. For this reason, they are also what we call here [-dynamic]. All other d-affixes, except the so-called #p#, are [+dynamic] in Kiswahili.

6.0. CONCLUSION

The observations above show us in what new directions a study of p-item derivational affixes may be undertaken in Kiswahili. In our view, there are underlying structural constraints on the operation of the morphemes in Kiswahili, the unearthing of which reveals the existence of 'new' affixes such as the **'PROGRESSIVE'** #LILI#. In this way we are able to understand better the form of the 'applicative' and the 'progressive' morphemes and their morpho-syntax. The 'a-within-a' constraint taken together with the 'Derivational Mirror-Image Constraint' and the 'Sequential Derivational Constraint' of Kiswahili p-item derivational structures make it indoubitably clear that [ili] or #LILI# is a distinct morpheme in Kiswahili and is not a derived morpheme or allomorph of a morpheme. As a morpheme, it has its own allomorphs. In addition to the above findings, we have compared, hopefully, in a lucid manner, the 'reversive' or 'regressive' d-mopheme with the 'progressive' and 'applicative'. We have discovered that the three d-affixes are subject to similar derivational constraints in some environments such as the fact that, **synchronically**, the underlying form of the affixes begin with the alveolar lateral approximant /l/ and not vowels as assumed in present descriptions. Inspite of this similarity, we have found also that the way in which these affixes pattern varies considerably and so underscores the claim that they are distinct and independent of each other. As a further result of this realisation, we discover that d-affixes vary in their dynamic functions but all the affixes in Kiswahili p-item derivations can be classified, 'salva analyticitate', in a binary manner as either [+dynamic] or [-dynamic] but not both. There is no affix which functions outside of this framework.

It is our hope that further research will confirm and deepen the above conclusions and possibly bring about a revision of the number of d-affixes used in the derivation of Kiswahili predicate items.

BIBLIOGRAPHY

Amidu, A. A.(1980). Locative Marking and Locative Choice in Swahili and their Semantic and Grammatical Implications. Ph.D. Thesis. SOAS, University of London, London. Also available in British Thesis Service, Information Publ. International Ltd., Surrey, England.

_____(1990). Kimwondo: A Kiswahili Electoral Contesrt. Afro-Pub, Vienna

_____(1993b). 'Observations on Some Derivational Affixes in Kiswahili Predicate Items'. To appear in Working Papers in Linguistics. University of Trondheim, Trondheim.

Ashton, E. O.(1944,1947). Swahili Grammar. Longman Group Ltd. Essex, England.

Doke, C. M.(1943). Outline Grammar of Bantu. Univ. of Witwatersrand, Johannesburg. In Mimeo.

Harries, Lyndon(1962). Swahili Poetry. Oxford University Press, Oxford.

Johnson, F.(1939). A Standard Swahili-English Dictionary. O.U.P., Oxford.

Knappert, Jan(1979). Four Centuries of Swahili Verse. Heinemann Educational Books Ltd., London.

Matthews, P. H.(1972). Inflectional Morphology. C. U. P. Cambridge.

_____(1974). Morphology: An Introduction to the theory of word-structure. C. U. P. Cambridge.

Meinhof, C.(1899-1910). Grundriss einer Lautlehre der Bantusprachen. Leipzig. (English version: Introduction to the Phonology of the Bantu Languages. Ed., Warmelo, N.J. v. (1932). Berlin, D. Reimer/E. Vohsen)

Polome, E. C.(1967). Swahili Language Handbook. Center for Applied Linguistics, Washington, D. C.

Tucker, A. N. and Ashton, E. O.(1942). 'Swahili Phonetics'. African Studies, vol. 1 no. 2, pp 77-105, 161-183.

Whiteley, W. H.(1968). Some Problems of Transitivity in Swahili. SOAS, Univ. of London, London.

Asymmetry in Symmetrical Object Languages: A Problem for LFG? *

Camillia N. Keach,
Department of Linguistics, Temple University,
Philadelphia, PA 19122, USA

Michael S. Rochemont,
Department of Linguistics, University of Columbia,
Vancouver, BC, V6T 1Z1, Canada.

Bresnan and Moshi (1990) (henceforth, B&M) provide an elegant account within LFG of symmetrical and asymmetrical object behavior in applied benefactive constructions in (some) Bantu languages. Symmetrical object languages, like Kichaga, Kinyarwanda (KN) and Runyoro (RU), are languages which permit, for example, either the theme or the benefactive applied argument to become the subject of the passive verb, as in (1) and (2). (In contrast, in asymmetrical object languages such as Chichewa and Swahili, only a single argument displays such canonical object behavior as the ability to passivize.)

(1) KN a. Umukoobwa a-ra-andik-ir-w-a ibaruwa[1] [Baker 1988, 265]
girl SP-PRES-write-for-PASS-ASP letter
'A letter was written for the girl.'

b. Ibaruwa i-ra-andik-ir-w-a umukoobwa
letter SP-PRES-write-for-PASS-ASP girl
'A letter was written for the girl'

(2) RU a. abana ba-ka-cumb-ir-w-a omuceri
children they-PST-cook-APPL-PASS-asp rice
'Rice was cooked for the children.'

b. omuceri gu-ka-cumb-ir-w-a abana
rice it-PST-cook-APPL-PASS-asp children
'Rice was cooked for the children.'

Other symmetries of behavior in applied benefactives in symmetrical object languages include simultaneous object marking (OM) of one postverbal nominal while the other is passivized; OM of either or both arguments; and theme suppression in the presence of an applied beneficiary. Apart from word order, however, the LFG analysis makes no provision for asymmetrical object behavior in such languages. We will show here how the mechanisms described in B&M may be adapted to the analysis of Possessor Raising constructions, but with the consequence that no provision may be made for the asymmetrical object behavior which arises in such cases.

B&M's explanation for object symmetry lies in the allocation of the semantic/distributional features r(estricted) and o(bjective) to underspecified thematic roles at the intrinsic level of representation and to fully specified

grammatical functions at f-structure.[2] Following Alsina and Mchombo (1989), B&M propose the intrinsic classifications in (3) for applied constructions.

(3) a. Beneficiary
|
[-r]

b. Theme/Patient
/\
[-r] [+o]

Between the intrinsic and morpholexical levels and f-structure, LFG wedges a level of default specifications for underspecified feature sets which make the highest role [-r] and lower roles [+r]. Finally, after all features are fully specified, the Subject Condition requires that every (verbal) lexical form have a subject; and Function-Argument Biuniqueness (FAB) requires that every expressed thematic role be associated with a unique grammatical function, and conversely.

In the framework just described, RU and KN as symmetrical object languages are languages that permit more than one intrinsically [-r] argument where licensed by (3). As for the derivations of (l) and (2), the Subject Condition will permit two grammatical results where either [-r] argument, the beneficiary or the theme, is the subject (SUBJ), and the other is the object (OBJ) after passive suppresses the highest (agent) theta role and the defaults convert the remaining roles into potential grammatical functions. Moreover, this treatment also characterizes the single asymmetry in applied benefactive constructions in these languages: when both arguments follow the verb, the benefactive argument must precede the theme. (See Kimenyi (1980, 32) for word order in applied benefactives in KN.)

(4) a. Kato a-ka-cw-er-a Kimuli ebyakyo
Kato he-PST-cut-APPL-PASS-asp flowers
'Kato. cut flowers for Kimuli .'

b. * Kato akacwera ebyakyo Kimuli

B&M note that a common word order constraint in these languages is that the [-r] object (OBJ) must be adjacent to the verb. Since FAB requires there to be a unique OBJ, the beneficiary, the [-r] argument by (3), must be OBJ when both the theme and the beneficiary appear as superficial objects. The word order asymmetry in applied benefactive constructions is thus predicted.

Many Bantu languages exhibit Possessor Raising constructions (PR) in which the possessor of verb's object itself appears as a bare postverbal nominal as in (5) and (6). In equivalent examples without PR, the possessor appears in a postnominal phrase showing morphological agreement with the nominal (possessed) head (and, in KN, without the applied morpheme on the verb).

(5) KN muhuungu a-ra-som-er-a umukoobwa igitabo [Kimenyi 1980, 98]
boy he-pres-read-appl-asp girl book
'The boy reads the girl's book.'

(6) RU omusaija a-ka-cw-a Kato omukono
man he-PST-cut/break-asp Kato arm
'The man broke Kato's arm.'

Evidence that the raised possessor, like other applied arguments, may be intrinsically [-r] comes from passives. Once passive suppresses the verb's highest θ-role and after the defaults, only a [-r] argument may emerge as the subject. Since the raised possessor is the subject of the passive verb in (7), it must be [-r]. (See Kimenyi (1980, 103) for KN.)

(7) abana ba-ka-cwi-bw-a emikono
children they-PST-cut-PASS-asp arms
'The children's arms were cut.'

That the raised possessor, like the beneficiary applied argument, must be intrinsically [-r], is suggested by its required adjacency to the verb, as we show for Runyoro in (8) (compare (6)). (For KN see Kimenyi (1980, 98).)

(8) *musaija akacwa omukono Kato

This conclusion is further supported by the failure of PR to occur in applied benefactive constructions in either language.

(9) KN * umugore a-ra-som-er-er-a umukoobwa ibitabo abaana [Kimenyi 1980, 100]
woman she-pres-read-appl-appl-asp girl books children

(10) RU * Kato a-ka-cw-er-a Kimuli abana isoke
Kato he-PST-cut-APPL-asp Kimuli children hair

An LFG explanation is at hand. If a raised possessor, like an applied beneficiary argument, is intrinsically only [-r], then the co-occurence of both arguments will ultimately violate FAB.[3] To achieve this result we conclude that the possessor in a PR construction must be intrinsically classified as [-r].

Recall that in B&M's analysis symmetrical object languages are those which tolerate more than a single [-r] argument at the intrinsic level, specifically in applied benefactives. Given that themes may alternate between [+o] and [-r] intrinsic classifications (3b), and the intrinsic classification of a raised possessor is [-r], we expect in such languages that both the theme and the raised possessor will be able to display canonical and even simultaneous object behavior. We will show this prediction to be false: PR is asymmetrical even in languages which otherwise display pervasive symmetrical behavior in applied benefactives, specifically in both Kinyarwanda and Runyoro.

Because it may select the [-r] option in (3b), the Runyoro theme is correctly predicted to be able to undergo theme suppression in applied benefactives (11a). By this same analysis we expect theme suppression to be possible in PR as well, but as (11b) shows it is not.

(11) a. Kato a-ka-kwat-ir-a abana
Kato he-PST-catch-APPL-asp children
'Kato caught (something) for the children.'

b. Kato a-ka-kwat-a abana
Kato he-PST-catch-asp children
*'Kato caught (something of) the child's.'
'Kato caught the children.'

This same contrast in the behavior of the theme in PR and applied benefactives arises in the passive as well. Although the theme may passivize in an applied benefactive (1) and (2), it may not in PR.

(12) RU a.* isoke li-ka-kwat-w-a omuwana
hair it-PST-catch-PASS-asp child

KN b.* ibiryo by-a-ri-ir-iw-e abana n'ingurube [Kimenyi 1980, 103]
food it-pst-eat-ben-PASS-asp children by pigs

That the theme may neither passivize nor be suppressed in PR suggests, contra (3b), that in such cases it may not be intrinsically classified as [-r]. Let us suppose, to be consistent with (3b), that some mechanism may be found to force the theme to select only the [+o] intrinsic classification in cases of PR. We will now present evidence that the theme may not receive a [+o] classification either.

B&M's analysis of object marking is that some languages allow only [-r] objects to object mark, while others allow any [+o] objects to. Runyoro and Kinyarwanda both license the latter type of object marking, specifically in applied benefactives. We therefore expect that if the theme is intrinsically classified as [+o] in cases of PR, then even though it may not passivize or be suppressed, it should still be able to trigger object marking, either alone or in tandem with an object marked or passivized possessor. Nevertheless, the relevant examples are ungrammatical. Examples (13) show that the theme may object mark in an applied benefactive construction but not in PR. (For Kinyarwanda, see Kimenyi (1980, 103).) Examples (14) show that the theme may not simultaneously object mark with an object marked possessor in PR, though it may with the beneficiary argument in an applied benefactive construction. Examples (15) show that, in Runyoro at least, the theme may not be object marked in the presence of a passivized possessor though it may in the presence of a passivized beneficiary. To our knowledge Kimenyi (1980) does not provide Kinyarwanda data equivalent to (15).)

(13) RU a. Kato a-ka-gu-kwat-ir-a abana [omupira] BEN
Kato he-PST-it-catch-APPL-asp children [ball]
'Kato caught it for the children [the ball] .'

b. *Kato a-ka - cw-a abana [isoke] PR
Kato he-PST-it-cut-asp the children [hair]
'Kato cut the children's [hair].'

(14) KN a. umugore y-a-ki-ba-som-e-ye [Kimenyi 1980, 181]
woman she-PST-it-them-read-APPL-asp
'The woman read it for them.' BEN
*'The woman read their's.' PR

RU b. Kato a-ka - ba-cw-er-a [isoke] BEN
'Kato cut it for them [hair].'

c. *Kato a-ka - ba-cw-a [isoke] PR
Kato he-PST-it-them-cut-asp [hair]
'Kato cut theirs [hair].'

(15) RU a. abana ba-ka - cw-er-w-a [isoke] BEN
children they-PST-it-cut-APPL-PASS-asp [hair]
'It [hair] was cut for the children.'

b. *Kato a-ka - cwi-bw-a [isoke] PR
Kato he-PST-it-cut-PASS-asp [hair]
'Kato's [hair] was cut.'

To summarize, what the data in (11)-(15) show is that the theme in PR constructions in symmetrical object languages may select neither of the intrinsic classifications in (3b).

In fact, the theme in PR constructions in these symmetrical object languages fails to behave like an object, whether restricted or unrestricted, in two respects. First, Runyoro and Kinyarwanda objects may be object marked, but the theme in PR constructions may not. Second, objects (in contrast to obliques, B&M (1990, 164-5)) may generally relativize in Runyoro and Kinyarwanda but the theme in PR constructions may not. This is claimed for Kinyarwanda by Kimenyi (1980, 103) and shown for Runyoro below.

(16) a. n-ka-ror-a omuwana omusaija owuy-a-cw-ir-e omukono
I-PST-see-asp child man REL-he-cut/break-PST-asp arm
'I saw the child whose arm the man broke.'

b. *n-ka-ror-a omukono omusaija oguy-a-cw-ir-e omwana
I-PST-see-asp arm man REL-he-cut/break-PST-asp child
'I saw the arm of the child that the man broke.'

In summary, LFG's analysis of symmetrical object languages does not extend in any obvious way to PR, and moreover faces a problem in its apparent treatment of the theme in such cases. In applied benefactives, the theme has either of the intrinsic classifications in (3b); but in PR it can have neither.

We have just seen that the asymmetric behavior induced by PR in symmetrical object languages finds no obvious account within current proposals in LFG. RG does provide an account of these data (see eg. Perlmutter 1989), but only at the risk of the same criticism made against the RG account of symmetry in B&M; that is, the account provided is too rule particular to reveal an explanation through principles of Universal Grammar. Can this particular

pattern of asymmetry with PR be explained in GB? A reviewer for LI suggests to us that it may, and we are inclined to agree (see eg. Keach and Rochemont 1991, Rochemont and Keach 1992). But to provide a GB analysis of just this pattern of asymmetry without including an analysis of a/symmetry more generally would not be sufficient to address the challenge we have posed here for LFG. Moreover, B&M argue persuasively against prevailing accounts of a/symmetry in GB, thus rendering implausible any GB account of the particular asymmetry displayed in PR that does not also provide an analysis of a/symmetry more generally. While we think this a worthwhile endeavor, the goal of this paper is distinctly more modest. We have shown here simply that the theoretical assumptions which underlie B&M's very compelling analysis of a/symmetry in applied benefactives give rise to a problematical analysis of PR, in which there is pervasive asymmetrical object behavior even in otherwise symmetrical object languages.

Footnotes

* We are grateful for grants from Temple University and the U.S.A. Social Science Research Council (Keach) and the Social Science and Humanities Research Council (SSHRC) of Canada (grant no. 410-89-1239) (Rochemont), without which this paper could not have been written. We thank Zebiya Rigby for her judgments on the Runyoro data. We also thank three anonymous reviewers for their comments on an earlier version. We share responsibility equally for the contents of the paper and for any errors or omissions it may contain.

1. Since the Kinyarwanda data come from Baker (1988) and Kimenyi (1980), we will provide the glosses given there, including the page and example numbers after the citations. The Runyoro data is from our own field work. For simplicity, the Runyoro glosses will conform to the conventions of Kimenyi (1980).

2. The grammatical functions assumed are subject (SUBJ = -r,-o), object (OBJ = -r, +o), thematically restricted objects (OBJ-θ = +r,+o), and thematically restricted obliques (OBL-θ = +r,-o).

3. Note that this argument does not extend fully, since passivization or object marking of either argument should give rise to an acceptable interaction of PR and applied benefactives under FAB, but in fact do not.

References

Alsina, A. and S. Mchombo (1989) "Object Asymmetries in the Chichewa Applicative Construction," ms., Stanford University and the University of California, Berkeley.

Baker, M. (1988) Incorporation: A Theory of Grammatical Function Changing, University of Chicago Press, Chicago, Illinois.

Bresnan, J. and L. Moshi (1990) "Object Asymnmetries in Comparative Bantu Syntax, in Linguistic Inquiry 21,147-185.

Guthrie, M. (1948) The Classification of the Bantu Languages, Oxford University Press, London.

Keach, C.N. and M. Rochemont (1991) "Symmetry, Case, and Agreement in Bantu," GLOW Newsletter 28, Tilburg University, the Netherlands.

Kimenyi, A. (1980) A Relational Grammar of Kinvarwanda, University of California Press, Berkeley, California.

Perlmutter, D. (1989) "Kinarwanda Object Constructions: Consequences for Bantu and Universal Grammar" Bantu Conference, Berkeley, November, 1989.

Rochemont, M & C.N. Keach (1991) "Symmetry, Case and Agreement in Bantu," unpublished ms., University of British Columbia, Vancouver, BC and Temple University, Philadelphia, PA.

ISSN 0802-3956

95

BEST COPY AVAILABLE